

GUPPY ROUNDTABLE

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BACKGROUND COLOR FOR YOUR HALF-BLACK AOC'S

By Jim Anderson, D.V.M.
President, Pan Pacific Guppy Association
International Fancy Guppy Association

Last month we covered some specific Half-Black AOC (Half-Black Any Other Color) crosses. For those unfamiliar with the terminology, a HBAOC has half-black body with a green, purple, variegated, or any other caudal for which there is not already a half-black class. The most commonly available half-black AOCs have a basic off-white caudal with black streaks or a pattern of black spots. These can be large beautiful fish but sometimes lack the colorful variety that we desire.

I have used HBAOC females and males from green, purple, and snakeskin lines to enhance the color and pattern in my HBAOCs. The half-black body color is dominant in my HBAOC line, so I can use males or females and still get half-blacks.

A purple delta male crossed into a HBAOC female produces a large vigorous show fish with a variegated white, purple, and black caudal. These fish seem very hardy, are long-lived, and prolific. This is the best of the HB crosses I have tried. Mike Lastella gave me the idea about seven years ago when I inquired about his large Best of Show HBAOCs. He used purple delta females crossed into HBAOC males. He showed the offspring

but did not use them for breeding. The males had light purple tails with a pattern of large black spots. The dorsals were matching. I am currently trying to fix this color pattern in a true breeding line.

Green males crossed into HBAOC females can produce outstanding results. The offspring have mint green caudals and dorsals with black spotting. It is best to use a light green male for the cross, as a dark green male tends to produce too many dark smudges in the tail of the offspring. These fish are quite striking but, unfortunately, not as hardy as the purple cross. Green lines in general are a little less hardy than other solid color lines.

A snakeskin male crossed into a HBAOC female produces a fish with bright white caudal with a finely variegated caudal pattern of black spots. The females carry a similar caudal and dorsal pattern and are show quality. These fish do not get quite as large as the above crosses, but are very active and fertile.

Iwould suggest using the best males from these crosses and breeding them to pure HBAOC females to fix the color or pattern into your line. The HBAOCs offer a tremendous amount of variability and are an excellent beginner's fish.

OVERFEEDING

By: Steven Ward
Greater Seattle Aquarium Society

Overfeeding is, in my opinion, one of the leading causes of disease in all aquarium tropical fishes, including the fancy guppy. Good nutrition is important, but fish actually require a much smaller quantity of food than is commonly believed. It is a common mistake to assume that the more food given the better off the fish will be. Heavy feedings may result in faster growth but also in the absolute necessity of more extensive aeration and filtration, more frequent water changes, and lower stocking levels. If these conditions are not met, the extra feeding can actually be harmful to the fish.

Low oxygen levels contribute to disease by encouraging the growth of pathogens, stressing the fish, and adversely affecting the immune system of the fish. Microorganisms that feed on decaying food and fish wastes consume oxygen, and fish require more oxygen after heavy feedings and in the presence of high levels of nitrogenous wastes.

Nitrogenous wastes can have a direct toxic effect on fish or predispose them to disease, and at the same time can encourage the growth of many pathogens and potential pathogens. Dissolved organic material, and the saprophytes that feed on it, are

also known to enhance the growth of various disease organisms.

Some organisms that flourish under conditions of mild organic pollution do not attack fish directly, but their presence in large numbers can be deadly. I have observed many cases in which a misplaced fish was found to have survived for over two months without food, and I have seen a lot of cases in which an entire tank of fish died overnight after being fed a little too much.

It is human nature to want to feed animals, and that is one of the few ways in which we can interact with our fish. But, it is important to remember that fish can usually go without food for a longer period of time than they can go without water changes. I admit that I have killed plenty of fish by throwing food into an already dirty tank. However, I try to follow these basic rules:

- ~Never feed more than the fish can eat in five minutes.
- ~Never feed a dirty tank.
- ~Never feed sick fish, well, almost never.
- ~Underfeeding is better than overfeeding.
- ~"Pigging out" is not good, or natural, for fish. Fish are generally healthier and more active when fed moderately.

LAST MONTH'S GUPPY CLUB MEETING

By: Don Kawano, Secretary
Pan Pacific Guppy Association

In Sunday, February 21, 1993 Pan Pacific Guppy Association meeting was hosted by club President, Jim Alderson. Besides the usual oohing and aahing at the many varieties of championship quality guppies in Jim's fishroom, two important items were discussed.

Our annual Guppy Show will be held April 24 and 25, 1993 at the Holiday Inn Express, 1170 Fairway Drive, Walnut, California. Besides the hard work to be done on April 24 and 25, 1993, Club Members are asked to mark Friday, April 23, 1993 on their calendar as a day to help set-up benches and bowl fish. Responsibilities will be discussed in detail at our next meeting at Dave Wexler's home on March 21, 1993.

The second item of import was the decision to have a bowl show at our next meeting. Club Members are encouraged to bring fish to the meeting that will be judged and pointed by International Fancy Guppy Association standards. This will help any of our members who have questions about the standards and are curious about the differences between a good fish and an excellent fish.

Club Members were also asked to advise Jim Alderson what trio of guppies will be available to auction the final day of the Guppy Show.

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GUPPY ROUNDTABLE

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GETTING TO KNOW THE GUPPY

By: Michael Scheldt

The guppy may be the world's best known ornamental tropical fish. It has been the starting point in the aquarium hobby for multitudes of fishkeepers. Although occasionally maligned as being "just a beginner's fish," the guppy is also the sole passion of a dedicated group of serious, advanced aquarists.

The guppy (*Poecilia reticulata*) derives its common name from the Reverend Lechmere Guppy, an Englishman who was one of several people to introduce this little

fish to the scientific community in Europe in the mid-1800s. The guppy's native habitat is the northern coast of South America and the islands of the West Indies. Today, however, the guppy can be found in countries around the world, largely as a result of its adaptability and voracious appetite for mosquito larvae. The guppy easily adapts to many different kinds of water conditions, and its readiness to breed and increase its population have led to another common name, the "million fish."

The wild form of the guppy, often referred to as the Trinidad guppy after one of its native lands, is a far cry in both form and color from the domesticated varieties familiar to most aquarists today. The males' light-colored bodies and fins are marked by small, highly variable spots and splashes of color of varying shades and intensities. The females are almost totally devoid of distinctive markings.

The fins of both males and females are relatively small when compared with guppies in the aquarium hobby,

in fact, the entire fish grows to perhaps only one-half the size of some of the varieties developed by aquarists. After the guppy was introduced into the hobby during the first decade of this century, aquarists began selectively breeding the fish for color and size. About the only chance of finding a Trinidad guppy in today's pet store is in the feeder tank - even then, they are more likely to be the culs from breeders of fancy guppies.

Modern guppies are available in a dazzling array of color and fin varieties. The males in most pet

which have distinctly patterned markings on the body.

The second color designates the coloration of the fins. In the example above, the fish has red dorsal and caudal fins. Other fin colors include black, blue, green, pastel, purple, white, and yellow. For mixed color fish, the term "multicolor" is used. For true show guppies, it is important that the colors be as clean and pure as possible. It is also imperative that the dorsal and caudal colors match.

In this country, the International Fancy Guppy Association is the premier group overseeing the competitive exhibiting of guppies. For information on the IFGA,

contact Dick Scheldt; Membership Chairman; 11925 England Drive; Overland Park, Kansas 66213. The International Fancy Guppy Association has established standards for size, shape and color for exhibiting fancy guppies. An official IFGA show may contain more than seventy different classes representing divisions by tail type, color variety and male and female categories.

Each class has its own traits and peculiarities.

Breeders are constantly working to increase the size, improve the purity and intensity of color and increase the vigor of their guppies. It requires constant work just to maintain the quality of a strain. Guppies, left to themselves, will quickly breed back to inferior colors and sizes.

For many hobbyists, the colors and varieties of guppies that are available in pet and fish stores will be quite satisfactory. For the serious enthusiast interested in show-quality fish, however, the best sources are breeders of fancy guppies, many of whom are members of the IFGA.

(continued on page four)

**These small, colorful fish
are undoubtedly the
most popular with
aquarists**

shops have either "delta" or "vell" tails, the difference being the width or angle of the outside rays of the caudal (tail) fin. Other tail types, such as the roundtail, double-swords, lower-swords, upper-swords, the coferail and the pintail, are usually available only from specialists.

Guppy color schemes are frequently described by using a dual-color name, such as "half-black red." The first color indicates the body color, in this case a body whose rear half is all black. Other standard body colors include albino, bronze, gold, and grey. There are also the snakeskins,

Starting out with good stock is the key to any successful breeding program. When choosing guppies, there are several things to look for. Watch for physical deformities, such as twisted spines. The fish in a tank should look healthy. Avoid fish with obvious signs of disease, such as unusual spots on the body or fins, patches of cottony fungus, clamped fins, and shimmying.

Males should have the body size and strength to hold up their long fancy tails. If a fish looks as if its tail is weighing it down, do not purchase it. Very old guppies will have a distinct curve to the body and should also be avoided. Healthy guppies swim actively in open water, whereas guppies that are sick will hide and huddle in corners. Only after you are able to determine that the fish are healthy are you ready to make choices based on color, fin shape, and body size.

Guppies can be kept in a variety of containers, but a ten-to-twenty gallon aquarium is best. A twenty gallon display tank and a few one gallon jars for maternity purposes will suffice. The display tank can be decorated with gravel and plants, which will provide an attractive background for the guppies. Breeders of guppies usually prefer bare tanks for ease of maintenance.

The type of filtration you choose will depend on the balance between aesthetics and ease of maintenance that is best for you. An undergravel filter or outside power filter is fine for a display tank, but a sponge filter would be preferable for a breeding tank. Even with effective filtration, maintaining good water quality in the enclosed environment of an aquarium requires partial water changes. Replacing some of the water in a tank dilutes the dissolved waste products that

remain in the water despite the filter system. For a display tank, changing twenty-five percent of the water every week should suffice; with breeder tanks, partial water changes should be made at least bi-weekly.

When keeping guppies, water chemistry factors, such as pH and hardness, are seldom a concern. These hardy fish can adjust to a wide range of water conditions, although if the water is extremely hard, fancy males may develop ragged tails. Removal of the chloring or chloramine that is added to tap water by municipal water departments is easily accomplished by using one of the commercially prepared water treatments on the market such as Ace Water Treatment, NovAqua, PolyAqua, Stresscoat, or Tap Water Conditioner.

Guppies are most comfortable at water temperatures of sixty-eight to eighty-six degrees Fahrenheit, with an optimal temperature of around seventy-six degrees Fahrenheit. To encourage breeding and rapid growth, temperatures can be raised to eighty or eighty-six degrees. Unfortunately, there is a trade-off at these higher temperatures: increased metabolism and therefore a much shorter life span.

Without a doubt the most important aspect of breeding, keeping, and raising guppies is proper feeding. Fortunately for hobbyists, the guppy is one of those fish that will eat almost anything it can get in its mouth. The benefit of this is that you can feed a variety of foods, thus ensuring that the fish will receive all the nutrients they need.

Live foods should definitely be included in guppy's diets whenever possible. Daphnia, mosquito larvae, various worms and brine shrimp are excellent choices. Some of these will be available from the local tropical fish store, whereas others may have to be collected by the aquarists. In particular, the hatching and feeding of live baby brine shrimp is an absolute must for the serious guppy keeper. It is the food of choice for giving guppy fry a good start in life.

(continued on page five)

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In the absence of live food, the freeze-dried versions of these foods can be used successfully. Freeze-dried foods are convenient, being readily available and easy to feed. The most common commercially prepared foods are the dry flake foods. Much of the work done on fish nutrition in recent years has led to the development of specialty flake foods. Many of the guppy flake foods now available provide for the guppy's particular nutritional needs and also contain ingredients that help enhance the colors of the fish.

Once your guppies are correctly housed and well-fed, they will proceed to do what comes naturally, produce dozens and dozens and dozens of baby guppies. One of the reasons guppies are so popular is that they are livebearers and will breed readily.

Courtship and mating occur continuously in a guppy aquarium, interrupted only by feeding and darkness. The persistent attention by male guppies can be quite hard on the female guppies, so it is best to have at least two, and preferably, more females for every male.

An adult female can drop a new batch of twenty to one hundred fry approximately every thirty days, depending on the strain, water temperature, size, age and quality of food. The fry are usually delivered folded over in a ball, head to tail, and drop straight to the bottom of the tank. It takes a few seconds to straighten out and become oriented in the aquarium, and then the fry dash to the surface to get a gulp of air to fill their tiny swim bladder. At this point, the fry are vulnerable to hungry tankmates and, unfortunately, even the mother

herself. This predation is a basic problem to be solved by a guppy breeder.

The best solution is to isolate the female guppy before she gives birth. Although breeding traps are available that confine the female while allowing the young to drop through the netting to the bottom of the tank, I prefer a well-planted nursery tank. The commercial traps are often too small, and they can prevent the fry from swimming to the surface for that first gulp of air.

I use a container of at least one gallon in capacity and furnish it with plants: Java moss covering the bottom and Hornwort strawn across

several broods from that one mating. This phenomenon, known as "superfecundation," is very important to the breeder. To breed for particular colors, size or finnage, it is essential that the male be mated with either a virgin female or one that has been isolated for several months and is no longer dropping fry.

Once the guppy fry are born, the breeder is faced with two problems. First, guppies are so prolific that it is impossible to care for and raise every baby fish. Second, many of the fry simply will not match up to the standards of the parents. The breeder must therefore cull the inferior fish.

Those fry with obvious defects should be immediately destroyed. They are excellent food for your other fish. As the remaining fish grow and the colors and fins develop, those that are not up to standard should be culled. These can also be used as fish food, or given to friends or sold to pet stores. You must be absolutely ruthless in your

culling. Otherwise, you will be overrun with guppies you cannot properly maintain and you will have less desirable adults producing even less desirable fry. You must cull, cull, cull.

Guppies are very easy to care for, are extremely beautiful to look at and take up little room, even if you are breeding several different classes. This article has only briefly touched on some of the aspects of breeding, keeping, and raising them. My hope is that it will make you want to take a closer look at keeping guppies.

Courtship and mating occur continuously in a well maintained guppy aquarium

the top, for example. The plants provide a dark, quiet space that enables the female to feel more secure and, at the same time, provide more than enough cover to allow the newborn fry to escape possible predation by the mother.

The female guppy should be gently placed in the isolation tank approximately ten days before her "due date." The timing can be established by noting when the female drops fry and then remembering in twenty days to move her for the next brood. When a female guppy mates with a male guppy, she is capable of storing the sperm and producing

INSULATE YOUR AQUARIUM

By Bill Ponik
Norwalk Aquarium Society

I have not seen any articles on insulating your aquariums, and I find in conversations with other hobbyists that many are not aware of insulating benefits.

You are all aware of energy conservation, not only for conserving natural resources but for the savings in your pocketbook. But it seems that while many are aware of insulating their home, evidently, they do not think about insulating their tanks.

Think about it for a moment. In winter, you may have your home thermostat set for sixty-eight degrees Fahrenheit, maybe even less at night. Yet most fish tanks are kept up in the mid-seventies. Several guppy keepers reputedly keep their tanks near ninety degrees Fahrenheit.

I have no figures to substantiate the dollar savings, but the savings are there. With insulation I find that my tank heaters work less. Besides the savings, insulation also helps keep temperature fluctuations to a minimum, and reduces the temperature gradients in the tank.

The key to insulating your aquarium is to cut down on heat loss by radiation and convection. Your aquarium is heated to seventy-four plus degrees, which acts like a convector in a room with cooler temperatures.

All the insulating materials are cheaply and readily available at any home improvement center in the form of polystyrene or styrofoam panels. Before I set up my aquariums, I cut and provide a panel of this foam to pad my aquarium on. This actually serves two purposes. First, it cuts down on the heat loss through the bottom of your tank. Second, it also provides an excellent cushioning material to take up uneven surfaces between the tank

and the stand. I prefer to use the denser type of foam for this bed, such as the foil faces of the blue/green styro type used for sliding your house. The white styrofoam is too soft and little fingers like to dig and pull at the exposed edges.

The expanded styrofoam I use to cover the back and two ends of the tank. Tanks that require power filters will have cut outs in the foam for them. Along a wall, the entire sheet is wedged against the glass by cutting strips of the same material, a half inch or so wide, and wedging these strips between the wall and the panel. If you are utilizing any background material, I have found the poly material holds this nicely in place, completely eliminating sag and voids. The two ends I cover with the same material, but these I tape in place for easy removal.

In the summer months, I will remove the end panels to prevent heat buildup during periods of warm temperatures. However if you air condition your house much below seventy-two degrees Fahrenheit, any excess heat lost from the tank is entirely "wasted" and puts extra load on the air conditioner, so you might be better to leave them on. Just be aware that heat build up can occur from lights, the motors of filters, etc., and monitor your tank to determine what is best for your particular setup.

Another advantage to having the ends

of the tank covered with styrofoam is that it helps shield the fish from movements from the sides, be it from another tank or a human thoroughfare. Many species really appreciate this extra security and respond by displaying more color and less jitters.

I have heard some people object to how the styrofoam looks. I have a friend who took care of that concern by gluing the styrofoam to some wood paneling.

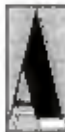
Another variation I have heard about involves tanks at a place of business. To help shield the fish from the temperature fluctuations at night and over weekends, some people have even made removable styrofoam fronts for their tanks. During the day when people are around, you remove the front of course. But before going home, the front is attached. The fish remain in their cozy cocoon until people return. If you do this, be sure not to startle the fish by exposing them to bright lights immediately from darkness, either when removing the cover or, less apparent, even when the normal tank lights are on. Either allow some light to come in by not fully covering the front, or if the hood allows it, mount a small light and arrange with a timer for it to come on before the full light is bombarded onto the fish.



"I do not care if your aquarium heater broke. You are not wrapping the tank with our electric blanket!"

GUPSYCHOLOGY

By Alan Charlton
Excerpta from *Guppy Roundtable*, 1972



a one pursues breeding show-quality fancy guppies, the astute hobbyist cannot help but observe some of the guppy's psychological quirks. For what they are worth, here are a few of my own observations:

NEVER PUT A SINGLE PAIR INTO A BREEDING TANK ALONE

For one thing, they always act as though they think something nasty ate all the other guppies, and it will get them too. For another thing, guppies are polygamous and one female to one male is not enough. A single pair will express their resentment by staring each other out from a distance. Elimination of the element of choice is a great insult. Putting several fish into a breeding tank always helps to get things going. . . like a party when enough guests have arrived. If you want a brood from one particular female just remove her, or the other females, when she is due.

THERE IS NO PLACE LIKE HOME, OR AT LEAST THE WATER FROM IT

When you set up a breeding group, they will always be much less nervous and settle more quickly if you use water from their previous tanks in the breeding tank. A new aquarium with different water is totally foreign and they need more time to assess it for dangers and get to know it.

COLOR PREJUDICE

This can be a problem with guppies as with people. I only realized this problem recently when trying to breed a male with two gold and three grey females. He pestered the golds continuously but ignored the grey! Is it that the gold color is so conspicuous he can not tear his

ANYTHING BUT THE NET!

When catching guppies, do you net them? Most people do, and it causes unnecessary panic among the fish, often making them harder to catch, probably because the fish sense, through the lateral line, or hear the struggles of caught fish and do not want the same to happen to them! Whenever possible, I catch guppies in a jar, partly because of the panic effect and partly so that they are not taken from the water.

Guppsychology, then, is really something we ought to bear in mind to further our breeding. Although the cultivated guppy of today, with its fancy finnage and spectacular colors, is a far cry from the original wild form in appearance, it's mind is still that of the wild fish. Always avoid doing anything that makes your guppies feel that their survival is threatened.

eyes away? Oddly enough, half-black females do not seem to be ignored in the presence of ordinary gray guppies.

LIFE GETS TEDIOUS?

I am confident guppies get bored at one time or another. Most tropical fish do. Nearly all the fish I know are aware of the territory they inhabit. . . many have their favorite resting places, for instance. Fish have to know their home area as part of their survival equipment, but many, and our guppies are of this type, keep wandering and home is where they happen to be at the time. Confined to a small area like the average aquarium, guppies may well wish for pastures new. . . often a change of tank livens them up tremendously.

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EASY, SAFE METHOD FOR CONTROLLING ICK

By: Dieter Untergermiller
Pathologist

Ich "Ich" parasite - is one of the most common scourges of the hobbyist's aquarium. Its telltale "white spots" are among the most easily recognized signs of parasitic outbreaks in tropical, warmwater and coldwater fish. If left unchecked, this parasite can wipe out an entire tank of fish in a matter of days.

Needless to say, considerable effort has gone into finding effective methods of eradicating this pest. The problem is that many of these treatments are expensive, involve the use of toxic chemicals or require products that might not be readily available to the hobbyist on short notice. Invariably, it seems, one's fish become ill on Saturday or Sunday evening when all the stores are closed. In this article, I am synthesizing my research that common table salt represents an "effective, inexpensive, safe and easy to handle" method for controlling ichthyophthiriasis.

The study used four species of fish: catfish (*Tetodon tandanus*), juvenile golden perch (*Macquaria ambigua*), guppies (*Poecilia reticulata*), and silver perch (*Budytes budytes*). Separate experiments were carried out for each species. In each case, all fish were heavily "ich" infested and then divided evenly among treatment and control groups. The treatment groups were treated with five grams per liter of ordinary table salt (uniodized). This is a 0.5-percent solution, roughly equivalent to slightly less than four teaspoons of salt per gallon. The control tanks were maintained as any aquarium might be - no salt was added. All aquariums had supplementary aeration and biological filtration throughout testing.

CATFISH

One ich-infested fish was placed in a control tank and a treatment tank. The tanks were kept at seventy-three to seventy-nine degrees Fahrenheit. By day five, the catfish in the control tank was dead. The catfish in the treatment tank survived and the infesting parasite was not present under microscopic observation by day seven.

GOLDEN PERCH

Eight ich-infested golden perch



Photograph of enlarged *Ichthyophthirius*

were divided between the treatment and control tanks, which were kept between sixty-six and seventy-two degrees Fahrenheit. By day five, all golden perch in the control tank were dead. In contrast, all fish in the treatment group lived and by day seven microscopic observation showed the fish to be free of the parasite.

GUPPIES

Ten ich-infested guppies were divided between the treatment and control tanks, which were kept

between seventy-six and eighty degrees Fahrenheit. By day five, all guppies in the control tank were dead. In contrast, all guppies survived the infesting parasite in the treatment tank, and by day seven microscopic observation showed the guppies to be free of the parasite.

SILVER PERCH

Twenty-four infested silver perch were divided between the control and treatment tanks, which were kept at fifty-two to sixty-four degrees Fahrenheit. Another treatment tank was set up with five hundred ich-infested silver perch fry. The fry tank was kept at seventy-five degrees Fahrenheit. All silver perch in the control group were dead after eight days, whereas all silver perch in the treatment groups survived and were parasite-free. By day seven, intermediate life stages of the ich parasite could not be found on the fish in the seventy-five degree Fahrenheit treatment tank containing the fry, whereas it was not until day fourteen that the fish in the cooler treatment tank were ich-free. No reinfestation of the treated fry occurred by day thirty when the experiment ended.

In short, all the experiments produced the same results: The *Ichthyophthirius multifiliis* parasite was effectively and systematically controlled by long-term salt baths using salt concentrations of five grams per liter of water. The length of the bath for effective control depended on the water temperature. In warmwater aquariums and ponds, two weeks seems appropriate, whereas one week appears to be sufficient in tropical aquariums.

I am tempted to speculate the salt solution may interfere with the regulation of osmotic functions in the infesting stages of the ich parasite. For example, I observed that trophonts, the stage of the parasite burrowed into the fish,

(continued on page nine, column three)

THE HIDDEN FACTOR: DISSOLVED OXYGEN

By: Lee Flanders, PhD

Although aquarists are familiar with measurements for pH and water temperature, very few hobbyists have any idea what the amount of dissolved oxygen in their aquarium water is, or what it should be. In fact, it has never occurred to many fishkeepers that the concentration of oxygen in the water could be a matter of concern.

In lightly stocked tanks, the amount of dissolved oxygen is usually not a problem, but in tanks with numerous fish, things can be much different. Factors such as the lack of sufficient aeration, unusually warm water temperatures or power outages can cause significant difficulties because of dangerously low levels of oxygen in the water. Each factor alone can result in problems, and in combination the situation becomes even worse.

Good aeration means a strong flow of air bubbles rising to the surface. This serves two purposes:

1. Agitate the surface of the water for better exchange of dissolved oxygen and carbon dioxide, and
2. Create internal currents in the tank to bring water at the bottom up to the top.

The warmer water becomes, the less dissolved oxygen it holds. At normal tank temperatures, perhaps seventy-six degrees Fahrenheit, the ideal concentration of dissolved oxygen is 7.0 parts per million. When the water temperature reaches eighty-five degrees Fahrenheit, however, the oxygen level can drop as low as 5.5 parts per million or less. Many fish begin to have difficulties when the dissolved oxygen drops below 5.5 parts per million.

At normal tank temperatures, the type of filtration used can have a substantial effect on the levels of dissolved oxygen. Typical measurements for various setups can be as follows: airstone-driven undergravel filter - 7.5 parts per million; powerhead-driven undergravel filter with supplemental airstones in tank - 8.5 parts per million; powerhead-driven undergravel with no airstones - 5.5 parts per million; reverse-flow undergravel filter with supplemental airstones in tank - 8.0 parts per million; reverse-flow undergravel filter without airstones in tank - 4.5 parts per million.

Clearly, at higher than normal temperatures, some of these setups would not have sufficient dissolved oxygen. With the use of one or more airstones, however, the problem can be corrected.

A power outage is the worst of all situations in heavily stocked tanks, particularly in warm weather, because the dissolved oxygen level plummets quickly. Within hours fish will die from a lack of sufficient oxygen in the water.

Chronically low levels of dissolved oxygen have two major effects on the tank. The fish are under continual stress from the lack of sufficient oxygen for respiration and metabolism, and the nitrifying bacteria that provide biological filtration cannot metabolize ammonia and nitrite as efficiently, creating even more stress for the fish. Aquarists are familiar with measurements for pH and temperature; very few have any idea about their tank's content of dissolved oxygen.

EASY, SAFE METHOD FOR CONTROLLING ICK

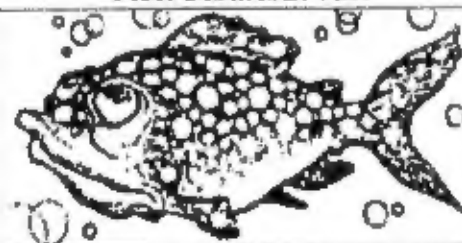
(continued from page eight)

shrank and became less active on the fish kept in the salt baths. At the same time, even though earlier stages of the parasite were in the water, the fish did not become reinfested. This suggests that the salt created an osmoregulatory problem for the parasite that prevented it from maturing into the infesting stage.

Furthermore, I would be remiss in failing to point out that salt can promote mucous production, healing and other beneficial fish health effects in freshwater fish. So, there may be a compound benefit to this treatment that goes beyond simply treating ich.

One note of caution. The level of salt used in this study is fairly high by freshwater standards. Some fish may tolerate such treatment easily - goldfish, for example. Others will certainly die from the salt exposure. Freshwater aquarium plants will also succumb to this level of salt. Consequently the aquarist or pondkeeper should test the effects of this treatment on individuals of species before proceeding with general treatment. In all cases, exposure to this level of salt should be accomplished gradually - over a period of hours.

FISH DISEASE: ICK



HOW TO SPOT IT

Fish appears to be covered in white spots

WHAT TO DO FOR IT

Wash fish with "Hand and Bodylotion", it has dandruff

HOW TO IMPROVE YOUR STRAIN OF GUPPIES

By Henry Kaufman
"So You Want to Raise Good Guppies"

During a recent lecture, one of the younger guppy enthusiasts put forward a question which I thought might be of interest to guppy beginners and to those of you who are not as far advanced as you eventually hope to be. The question was "What do you look for in a good fancy guppy, and how do you go about improving your strain?" Bear in mind that the person asking the question emphasized good fancy guppies and as yet was not interested in prize winning specimens. He obviously realized that you must learn how to walk before you learn how to run. That you must learn how to raise fairly good fish, then better specimens, and eventually you will arrive at the prize winning stage. The young man asking the question also requested that I refrain, as much as possible, from going into complex genetic diagrams with its confusing pictures and to try and give him an answer which both he and many of the other beginners could follow and put to practical use. I must say that he presented me with quite a problem, and I hope the following will give him the help he desires.

To begin with, a good fancy guppy should have the four following features:

1. A large body - this is necessary to support the large tail you hope to get.
2. A large tail - at least three-fourths of an inch at its widest point.
3. A long and thick flowing dorsal.
4. Good intense color.

Having established what are the essential features of a good

guppy, we now come to the second part of the question. "How do you go about improving your strain?"

Unfortunately, most hobbyists are one, two, or three tank keepers. To those of you who are at this stage and do not intend to expand, I sincerely advise you to forget the pursuit of breeding good guppies. I am not trying to turn you against raising these fancy fish, but merely trying to point out the fact that your task is next to impossible. You just do not have the desire and necessary supporting tools to do the job. Fancy guppies simply cannot be bred and raised with such limited equipment and I would be doing you an injustice in raising any hope that you might have to accomplish such a goal. However, I can still try to console you by pointing out that you can still enjoy many pleasant hours by merely owning a few nice pairs and admiring them as you do your other fish. It is indeed unfortunate that in order to raise and breed nice guppies, you must have at least a dozen to twenty ten and fifteen gallon tanks, related equipment such as filters and heaters, fairly good beginning stock, and the desire to put in some extra work.

Assuming that you have the required number of tanks, and knowing the four major points to



"What do you mean I have 'crazy fish'?" I am the product of generations of selective breeding!"

look for in a guppy, we can now take the next step forward. This is the point where we acquire our breeding stock. Practically all beginners fall into one of the several following classes when they reach the point of hunting for good beginning stock.

Many of you have never really seen a good pair of guppies, so before you pick your fish, it might not be a bad idea to visit a few of the local guppy shows or to attend a guppy club meeting and acquaint yourself with what some of the other breeders have in stock. In this way you can get a good idea of what you should look for. Some beginners go into a pet shop and buy the first nice pair or two of fish they see. No inquiry is made as to whether or not the strain breeds true, or what is the actual age of the fish they are observing, what are the size of the broods these fish deliver as young breeders, and as old breeders, what is the life expectancy of this particular strain, or any other related facts that would give you some important background on the fish you expect to be the parents of all your future young. Another kind of beginner is one who gets a nice male from one strain and a nice looking female from another strain. He mates the two fish and when the young grow up, he expects that because he used two nice fish to start with, he should have an abundance of nice offspring.

If you intend to use any of the above methods, the only course of action you can follow is to procure fry from such a mating and separate the males from the females as soon as you can distinguish sex. At the age of three months, pick out the nicest males and the nicest females using body size as the determining factor at this time. The tail size, dorsal, and color will come at a later age if the fish have these qualities in their final make up. Continue this process for several generations, making sure that each successive generation is a little better than the last one. If this is not so,

(continued on page eleven)

discard the strain and start with another one. Once in a great while, using the above method, you will come up with something good. If you do, it will be as a result of a lot of good luck, since these methods of selection for starting stock are very poor.

Do you really expect to raise good guppies, if so, there is a very simple way to get a good start. Go directly to an established guppy breeder. By this I mean one where you can actually see him raising both the stock you buy and also both younger and older fish that bear the same characteristics as the ones he will sell you. This will insure that you can reasonably expect to get fish that should produce good young. Ask the breeder to guarantee you that the young you get are males and females from the same strain, have not been previously bred to an unrelated strain, and have him give you assurance that the young should breed reasonably true. If he knows his stock as well as he should, and is a sincere breeder who is genuinely interested in helping promote the hobby, he should have no qualms about these assurances. If he will not give you these guarantees, go out and find a breeder who will.

Procure at least three pairs or, better still, an eightsome. This consists of three males and five females. Place them together, and I emphasize together, in a ten or fifteen gallon tank. There are many reasons why I advocate that you raise these fish together as a group, but I would take another article on this point to give you all the reasons. You will have to bear with me and accept my statement that this is the correct procedure. When you observe that a female is about to have young, place her alone in a tank to await delivery. If she is well fed, she will not normally eat her young. If you have any qualms about this procedure, you may place her in a breeding trap. Be

sure the trap is at least twelve inches long so the female will not injure herself during her stay. Also make sure that before you transfer the female to the new tank that the pH and the temperature is the same in the raising tank as well as the breeding tank. When the young arrive, raise them until you can determine their sex. You should be able to do this at the two or three week stage. Even if you delay this separation, and find that some of the young are already pregnant, do not become too overly concerned. When this happens with an untrue strain, the results can be disastrous but if you are using a known true breeding strain, the last male to hit the female will be the father of the following batch. This is not true when working with a male and female of two different strains. At this point separate the fish putting the males in one tank and the females in another. You can label this "Tank A". Do the same with each of the other breeding females and you can label these young "B", "C", "D", and "E". Within two or three months, from the broods of only five females you can be using the twenty tanks we recommended.

When the fish are three months old, you can now begin to look for your next generation of breeders. Observe the males in tanks "A" and "E" and after you have decided which tank has the males with the largest bodies, select the largest three. Also select the eight largest females from the same tank as the males came from. These fish will generally be the ones that later turn out to be the choice specimens. You can also make up another breeding tank or two by selecting the best single male from each of the other tanks and getting the corresponding females from the other tanks and then form another future breeding tank. This same process can be repeated on the second round of your original

breeding stock. This can act as insurance in case something happens to your first breeders. The reason we employ robust bodies as a primary factor at the early selection is due to the fact that in the growth pattern of a guppy the body grows first, then the tail, and finally the dorsal fin. If you look for a large body at an early age, and bear in mind that your original breeders came from true stock with wide tails and large dorsals, you can expect that as your selections progress in age, the large tail and dorsal will eventually appear. The reason we use the male in preference to the female is that the characteristics of the male are more readily discernible than those of the female and if we pick the better males and use their sister females, we can expect a greater degree of success.

At this point, you will because of limitation on your space, have to dispose of a great many of the remaining young and concentrate your efforts on your new breeding stock and new young. If you follow this procedure for several generations you should be able to find and select better specimens from each successive lot. Not only should you be able to pick better guppies, but you also can take advantage of one other single important result that is taking place.

We know there are a good deal of mutations appearing in even the truest strains. It is therefore reasonable to expect that among the guppies you raise, you will run across something that is new and different. Using the same procedures you have been following, you will be able to create a totally different strain of guppy which will be a distinct product of your personal efforts. If all you beginners jump into the race, before too long we can look forward to seeing a number of new good strains of guppies. Eventually the beginners of today will be the champion breeders of tomorrow.

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HOW (NOT) TO GET STARTED WITH GUPPIES

Or Some Basic Beginners Mistakes

By Jeffrey Kaplan

Let me start off by saying that I did not even know what I was getting into when I accepted the gift of a five gallon tank, an old air pump, an old green heater, an undergravel filter, and a makoshin hood with a bulb in it from my uncle. For crying out loud, I was almost forty years old then, and I already had a "Heinz 57" cat and a parakeet which behaved more like a chicken than anything else. What did I need with fish? The rationale, as it was explained to me, was that my basement office needed some additional life in it besides the occasional visit from the cat. I could not argue with that, so home I went with my new acquisitions.

I knew that you had to have gravel on the bottom of the tank, but I did not give much thought to the color of the gravel. I figured why not have a mix? So, without giving thought to the types or coloring of fish which I might decide to have in the tank, I bought some green, red, and yellow gravel, mixed it together, rinsed it, and dumped it into the tank. All of it. About six inches deep! What did I know?

Next, I connected the air line, filled the tank with water, connected the line to the pump and plugged it in. I expected to see bubbles coming out of the appropriate tube of the filter. Instead, the old pump sparked and shorted out! The inquisitive part of my mind starting working, I disconnected the air line from the pump and attempted to blow through it myself. Let me say this about that. I play a wind instrument and have no problem blowing into anything, generally, except fish tanks with too much gravel laying on the filter! I removed about half of the gravel and tried blowing again, to say the least, I saw bubbles, not stars.

Back. I went to my local tropical fish emporium to obtain a better, stronger pump. Fortunately for me, their fish specialist was there this time. We talked about my situation for a while and decided that a Whisper 200 would be quite sufficient. And oh, by the way, did I have the necessary chemicals to de-chlorinate the water, some plants, a pH kit and a thermometer? I did by the time I left the store. And they had my money!

I plugged the Whisper in and all of the sudden I had a tidal wave brewing in the tank. Obviously too much power! Another trek to the store to find out this time I needed a bleeder and some additional air line. And how about a general information book this time just to help me out? Good idea. (Hang in there folks - this gets better!)

Now I had to calibrate the heater to get an even temperature in the tank. I turned on everything except the light and watched the temperature fluctuate all over the place during the day. You probably should be reminded here that the exterior environment was a basement - an unheated Midwest basement in the middle of a cold winter of course. Well, I did have a little electric heater to keep my feet warm, but that did not do much for the rest of the office area.

Typical office temperatures went from fifty-five degrees Fahrenheit during the day to seventy-four degrees Fahrenheit by

the end of the day with all of the lights and computer gear adding the extra heat. The tank could not seem to stay at any one temperature - it fluctuated all over the place.

I called a different pet emporium this time. I was advised to turn off the tank and stabilize the room temperature overnight to get the tank in sync with everything else. Then reactivate the tank and set the heater just until its little light went off. This done, I closed up shop one cold night with the room at about seventy-two degrees Fahrenheit and the tank at about seventy-six degrees Fahrenheit. I kept the computer turned on with the hopes that it would help keep the room warm. Whew! Tomorrow I could finally purchase my fish!

Wrong again!

The next morning, the aquarium was down to seventy degrees Fahrenheit and the room was at about sixty-two degrees Fahrenheit. Better, but not too ideal for fish, unless I wanted goldfish. Another call, this time to a store whose specialty is Tropical Fish, not winter sideline is fish. The answer? Obviously I needed a more powerful heater - one which could answer back to the cold and keep its cool in the warmth - just like a household furnace. Hold on to yourselves - I purchased a seventy-five watt heater for my five gallon tank. THAT definitely took care of the problem.

(Continued on page thirteen)



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To make this long story shorter, I have had four blue male delta tail guppies, one small catfish, and a plecostomus in the tank the last year. Things have stabilized well enough now with two of the guppies and the plecostomus making it through the last ten months unscathed. I do a thirty percent water change once a week, and feed everybody a balanced diet of Tetra Conditioning food. I have given some thought to live shrimp and worms but have not fed any of that yet. I read and hear that Milwaukee has a fairly active Aquarium Society, which I am considering joining. Something tells me I should have joined first, then fired up my gear.

From all of this, I learned that:

- If you choose to obtain advice and equipment from a store, be sure you deal with one whose primary business is fish - not cats, dogs, or gerbils - but fish.

- Read up on what kinds of fish cohabit well.

- Do not rush into things; it takes time and patience to set things up and get 'em right.

- Decide in advance of setting up your aquarium what kind(s) and generally what color(s) of fish you intend to keep, then landscape accordingly.

- Start out with CHEAP fish; do not make a One Hundred Dollar mistake when all you need is a Ten Dollar, or less, male delta tail fancy guppy.

- Make sure you know what you are giving to, or getting from, friends or relatives, and follow up with them to see how they are getting on.

Yes, folks, I am a beginner. I know I have got a lot more to learn if I ever decide to expand to a thirty gallon aquarium. But almost nothing I have ever run up against can replace the feeling of relaxation and peace of mind I get after sitting in front of the tank for a time and watching those beautiful creatures swimming around, without a care in the world, except where their next meal is. I swear my guppies are pigs in fish's scales!

But that, as they say, is another story.

WELCOME NEW GUPPY CLUB MEMBERS

By Davdene Tak
Pan Pacific Guppy Association

It is with great pleasure, in behalf of the constituency of the Pan Pacific Guppy Association, I welcome the following new members to our organization:

Gabor Brachna, Michael Busch, William Carville, William Fain, Gary Franz, Victor Mazzella, Richard McIntyre, David Polunas, Robert Resach, Joseph Rosenberry, Jim Russell, Gary Shantleffer, Joe Sickmiller, and James Svoboda.

Our objective this year is to significantly expand both the active and corresponding membership to the Pan Pacific Guppy Association. We would appreciate viewpoints, thoughts, suggestions, opinions, and ideas from all current guppy club members regarding measures that should be implemented to accomplish our lofty goals.

ARTICLES WANTED

Guppy Roundtable needs your input. Your experiences, information, knowledge, opinions, thoughts, and viewpoints can help make this newsletter more informative, interesting, and valuable for all breeders of fancy guppies, whether advanced or novice. You do not need to be the second coming of Charles Dickens, F. Scott Fitzgerald, Ernest Hemingway, or a perfect writer, that is why there are editors. The Newsletter Editor will gladly make the necessary grammar, punctuation, and spelling corrections.

With your help, we can succeed in creating a real Guppy Roundtable.

East Coast Guppy Association



The East Coast Guppy Association is presenting their Annual Guppy Auction on Sunday, April 25, 1993. General public viewing of the guppies available for auction will begin at 11:00 AM EST. Bidding is scheduled to start at 1:00 PM EST. All fees are donated by East Coast Guppy Association club members. Available color strains include: ALBINO (RED), ADO, BLACK, BLUE/GREEN, BICOLORED, BLUE DOUBLE SWORDTAIL, HALF-BLACK ADO, HALF-BLACK BLUE, HALF-BLACK PURPLE, HALF-BLACK RED, PURPLE, AND RED. Bids will be accepted in person, by mail, and by telephone throughout the duration of the auction.

GUPPY AUCTION LOCATION

DSM Custom Cabinetry
2094 Long Beach Road
Oceanside, New York
Telephone Number (509) 478-2016

For directions, please call Mike (astoria) at (510) 678-2018 during normal business hours. For further information, please contact Steve Giacobello at (914) 867-8452 from 7:00 PM to 11:00 PM EST.

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THE OFFICIAL MONTHLY PUBLICATION OF THE
INTERNATIONAL FANCY GUPPY ASSOCIATION
PUBLISHED BY THE PAN PACIFIC GUPPY ASSOCIATION

JULY 1993

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BREEDING FOR TYPE

By Jim Atkinson, President
International Fancy Guppy Association
Pan Pacific Guppy Association

Raising fancy guppy show stock is a continual learning process. After twenty years of raising show guppies some of the genetic nuances are just now becoming apparent. For years I read and listened to the best advice I could find on breeding guppies. I headed breeders that continually inbred and others that continually outcrossed. Certainly there is more than one successful genetic program to raise fancy guppies. The one factor that many breeders have failed to incorporate into their breeding program is the "type" of guppy they are trying to produce.

What is guppy "type". It is a term I use to describe the overall growth, vigor, deportment, symmetry and disease resistance of a line. I have a few lines that grow rapidly, are resistant to disease and swim beautifully until the day they die. Other lines are slow growing, not very hardy and develop fatty livers when fed heavily (these fish look "chubby"). Unfortunately the less vigorous lines frequently have superior color or finnage. During the development of a pure line I will look for a sport in a batch of males. This will be the male with great body size, eating every thing in sight and probably poor finnage and color. Take this male and breed him to half sister or cousin to stay within the line. With any luck you

will get some fish with the size and vigor of the sport male and the good coloration of his smaller relatives.

I have ruined many lines by continually selecting the best show type male from each generation. Eventually the fish get smaller and weaker with each generation. I will usually select at least two trios of breeders per generation. I select one trio on the basis of size, vigor and growth rate and the other on the basis of color and how well the fish conforms to the IFGA standards.

Many things that we perceive as environmental may well be genetic. For example, I have heard many breeders comment that if they feed too much baby brine shrimp their fish will get chubby, get sick or simply die. This may well be true, but I can put fish from two different lines in the same tank feed them heavily and one line will grow like mad and the other will simply blowup like a balloon because they cannot handle the heavy feeding.

Do not be afraid to outcross for reasons other than show characteristics. Go ahead and cross your anemic reds to a robust green. Within two to three generations and maybe sooner you will have robust reds. Breed for a type of guppy that is a joy to raise, not some weak specimen that you have to pamper along for ten months to get it to show size. And remember if it does not swim it should not win!

MYSTERIOUS MALADY

By Lee Flanders
Olewa Aquarium Society

For more than two years I have intermittently experienced a great number of losses among my guppies from some mysterious unknown malady which seems to claim its victims at approximately three to four months of age.

The first symptoms appear to be general loss of vigor and color, followed by tail hanging, wobbly swimming and finally whirling.

All kinds of possibilities were investigated to pin down this disease but for a long time no cause could be found.

I still have not positive evidence vitamin deficiency is the culprit

In the course of investigation, several things were discovered; first was the time element. Guppies separated into different batches at three weeks and moved to different locations, developed the same disease at age three to four months. It was also found the disease was not confined to one strain but only to individual batches from some strains. Indications were that whole broods of fry were infected very early in life, and that whatever causes the disease takes three to four months to develop and kill its victim. Many different batches of fish went "over the hill" and seriously cut down on stock for sale and for show.

I checked fish for flukes of both

varieties and found them in the gills and on the fins and bodies but not in sufficient quantities to cause the problems I was experiencing. I tried treating infected fish with hydrogen peroxide, neomycin, spectrogram and formaldehyde, all to no avail. I tried eliminating various foods from the diet, one at a time, still to no avail. Finally, it was my good fortune to be referred to Dr. Joan Budd of the Guelph Veterinary College, who accepted some of my diseased fish for testing.

Apparently a vitamin deficiency is causing fatty degeneration of the liver and possible other internal organs. This is surprising since our diet is based on fifty to sixty percent protein content

I have not had a recurrence of this problem of late due mainly, I believe, to a whole water change as a result of my recent move. The water supply at my former residence constantly smelled oily and had a murky greenish tint when freshly drawn from the tap, whereas my new water supply, though heavily chlorinated is at least clean to look at. Perhaps water was the problem or perhaps this is only an interim period between more troubles.

I still have not positive evidence that vitamin deficiency is the culprit, but I pass along these tid-bits to perhaps help someone who is having similar problems.

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GUPPY ROUNDTABLE

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TEMPERATURE

By Eugene Lerr, D.V.M.
Excerpted from Guppy Pond, May 1972

The range at which guppies can live covers a range of from about fifty-five to one hundred degrees Fahrenheit. I am sure you realize that there is a much narrower range that guppies like, but it is somewhat amazing that they are such tolerant creatures. While guppies will live at fifty-five degrees Fahrenheit, they do not like it and will do rather poorly. While the higher temperature of one hundred degrees Fahrenheit should not be used for several reasons, we will discuss one factor of this higher temperature which can be very interesting.

The normally accepted temperature for guppy culture is from about seventy-four to eighty degrees Fahrenheit. With this range guppies do the best and will give you the greatest rewards for your efforts.

There is a startling effect on the longevity of a guppy as the temperature is changed. A guppy raised at eighty degrees Fahrenheit from birth will probably be dead in eighteen to twenty months, while one raised at seventy-four degrees Fahrenheit will live thirty to forty-eight months. I have a number of fish which are kept at sixty-eight to seventy degrees Fahrenheit that are now just over five years old and are still doing fine.

Just as in almost all the other requirements for guppy cultures, there are two paths to proceed along when one is considering temperature. If you want large show guppies you must hold the temperature higher, somewhere in the eighty to eighty-six degrees Fahrenheit range. If you want your fish around for a long time and therefore have enough time to do

some genetic experiments, you should drop the temperature to about seventy-two to seventy-eight degrees Fahrenheit. There is a happy medium of course, and the best of both temperature ranges can be had by following this line. When the young are born place them in a tank at about eighty-two degrees Fahrenheit. As the young grow into adults, displaying their

causes a show fish to be past its prime in about fourteen to sixteen months. This is the price you pay for large quickly grown fish. It is very important that you keep in mind the breeders and be careful in your selection of both male and female. Select only fully matured fish, because it is only in the adults that one can truly see what their genetics is displaying. How often is the comment "the best looking fish I have always seem to be found in my tank of culls". This statement tells us that these people are culling

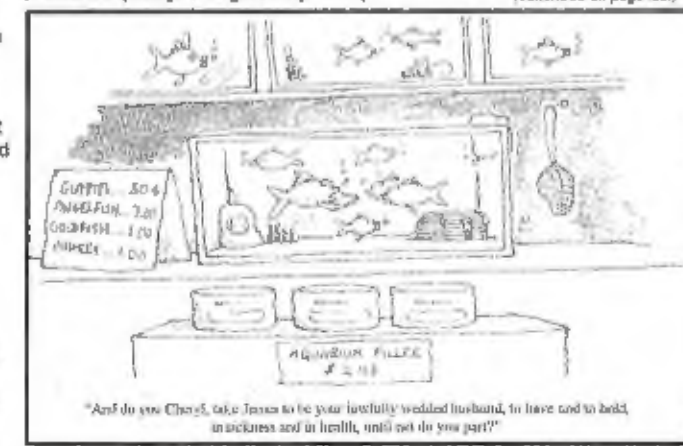
at too early an age, and therefore not getting the most out of the selection of breeders, as well as show stock in some cases.

I have started to do some work on this problem of temperature and have a series of tests by asking one question: will a male guppy from a given strain grow to the same size

and shape if it is raised at a lower temperature than its brother at a higher temperature, or is the only way to obtain maximum size and shape closely tied to high temperatures at all times?

So far I have tested only four strains and the results are about the same in each case. The fish raised at the lower temperatures reach about the

(continued on page four)



CULTURING "VINEGAR EELS"

By James Hirsch
Edgewood Valley Aquarist Society



Vinegar eels (also called "micro-eels") are a tiny worm quite similar to the microworm. Naturally, this means that in the aquarist's "ecology" vinegar eels and microworms fill approximately the same niche as both are fed to fry to supplement their diet of baby brine shrimp as first food. But in my experience, vinegar eels are much easier to culture and eel cultures lack the often offensive odor of microworm cultures.

I culture my vinegar eels in pint jars as this produces plenty of the little critters for my purposes. If a larger culture is desired, just use a larger container and multiply the amounts of the ingredients that follow by an appropriate number. In the pint jar I place one half pint water and one half pint apple cider vinegar (use of proper vinegar seems to be important to the success of the culture). If desired, you can use one hundred percent apple cider vinegar but you need not. Now add one tablespoon sugar

and stir thoroughly. When the sugar is dissolved, add your starter culture of vinegar eels. At this point the difficult part begins as it is best to wait until the culture gets good and thick before feeding from it. This could take up to six weeks, but once it gets thick you have a bunch of tiny worms.

Probably the first thing to do at this point is to start another culture so that when the first one is used up, the second one will be ready. After that, the feeding begins. To feed a small amount you can just squirt a little of the culture into the appropriate tank. Vinegar acidifies the water a bit and after a while it goes away. There are other feeding methods that are not much more trouble. Perhaps the easiest is to start with a funnel and set it in a jar or bowl. Cover the inside of the funnel with filter paper (a coffee filter will do). Pour some of your vinegar eel culture through this filter. As the filtered vinegar drains through, it can be put back into the main culture jar, if desired. The filter paper should end up loaded with vinegar eels. If you really want to keep the vinegar

out of your tanks, the eels can be rinsed with water. This will also serve to concentrate them at one point at the mouth of the funnel. At this point, you can proceed in either of two directions. You can dip the filter paper directly into the tank(s) or if you want a little more control over the amount of food placed into the tank, you can dip the paper into a bowl of water and then take a baster or eyedropper and squirt the worms into the appropriate tank(s).

I might add that I know of another culture medium that works well enough for vinegar eels. Several well respected breeders of guppies use pinto which they fill most of the way with boiled water. To this they add one tablespoon of plain pancake batter and waffle syrup. Once this mixture drops to room temperature, they add the starter culture. This method seems to take a little longer to get thick, but either way, the result is a fine food for even the smallest fry.

Culturing vinegar eels is so cheap and easy that there is no excuse for not having live food for tiny guppy fry. Just give your culture time to develop properly and the harvest of eels will satisfy your fry (and you) for weeks.

TEMPERATURE

(continued from page three)

same size as their brothers who were raised at higher water temperatures. I say almost because the fish when compared directly by measuring are slightly different. In the most drastic case, a blue wide tail strain, the length of the overall fish was 4.5mm longer in the fish at higher temperature. The average difference in total length was only 2mm. The blue wide tail that was 4.5mm longer than his brothers looked like a giant and it was easy to see a difference of even 1.5mm length. But I will do many more of these tests, before I can arrive at any solid answers to my original

question. The fish raised at the higher temperature (eighty-six degrees Fahrenheit) grew the fastest, and were all dead in about ten months. The fish grown at a lower temperature (seventy-four degrees Fahrenheit) were found to be growing slowly but surely all along the way. While they have not totally caught up with their brothers at higher temperatures, they are still alive at thirty-six months and still growing slowly. Who knows, if they live long enough they may catch up. But as I say there are more strains to be tested before we can make any firm statements.

Now for the very high temperature factor I mentioned earlier. When guppies are kept at one hundred degrees Fahrenheit they can be

maintained with a little care, and when the young are born one will find a higher rate of mutation. The higher the temperature, the higher the mutation rate. If you want to experiment, here is an extremely easy one to explore. The results are mostly unsatisfactory as is the case with most mutations, but once in a while a good new form may come along, and who knows, you might just obtain a truly spectacular guppy. As the fry are born at this high temperature, place them in a different tank where the temperature can be lowered a few degrees a day until you get them to seventy-four degrees Fahrenheit for a growing range. The parents must always be kept at the higher temperature as it is their bodies at the time of cell division that the changes occur.

OBSERVATIONS ON SPLIT TAILS

By Henry Kaufman
"So You Want To Raise Good Guppies"

During the past few years, the majority of questions I encounter by guppy enthusiasts concern methods used to produce larger bodies, wider tails, thicker flowing dorsals, and better coloration. Because of the wide interest manifested in these characteristics and the resulting helpful information published on them, quite a bit of progress has already been made in these areas. Needless to say, however, there is still room for more improvement. Of late, another question has been popping up and it relates to what has long been the area in which the least progress has been made. To the fancy guppy breeder, fin splitting is the all-time bugaboo.

Before we go any further, I would like to define the term split fin in contrast with another similar condition known as frayed tails. In a frayed tail, there is an irregular edge running vertically along the length of the caudal fin. It is apparently caused when the rays of the tail grow further out than the covering membrane and causes the edges of the membrane to look ragged. This frayed tail can often be carefully trimmed with a sharp razor blade and the new straight edge treated with a mild disinfectant to prevent diseases. The new tail will often grow back with a perfectly straight edge. However, it will have a smooth unnatural look and any good judge of guppies can usually distinguish between a natural straight tail and a frayed tail which has been trimmed and regrown. The regrown edge will in most cases have little coloring. I have seen, however, quite a few where it is impossible to tell whether or not surgery has taken place. In the

split fin and/or split tail, we refer to a break of the covering membrane which runs horizontally and can extend the entire length of the caudal fin or just a portion of the way. Once the tail of a fancy guppy is badly split, it is highly improbable that it will grow together again, and further splits will generally occur. In cases that I have observed, where the split is less than one-third of the entire length, cures often can be effected. Placing the fish alone in a small aquarium for a week or two, where the fish will be less active than if he had company, will often allow time for the wound to heal.

To the breeder of fancy guppies, fin splitting is the all-time bugaboo

Every breeder has at some time had the experience of raising a batch of what seemed to be excellent specimens only to find that when they finally got to prime size, a great number of the fish acquire split tails. To the dedicated breeder, the ones that seem to be the best of the lot are usually the ones with the split tails. Most breeders find that very few splits occur among the young, but when the fish reach four months of age, the splits begin to appear. They increase in numbers for the next two to three months and by the time the fish are eight months old, nearly half or more have split tails. The fact that a relatively small

percentage keep unsplit tails during their entire lifetime probably accounts for the breeder's great desire to raise more of these specimens. One of the most frustrating experiences I have ever encountered is to spend months raising a batch of several hundred males with the idea of eventually having some excellent specimens to enter in a show, and after taking infinite care in the growing and selection, and finally in the bagging and shipping, to arrive at the show and unpack the fish to find that some of my prizes have acquired splits. Sometimes, you only have to net some of these large specimens for transfer to another tank, and they acquire split tails during the process. I am sure that every exhibitor has had a similar experience.

During the past year, we have had a few articles appearing in aquarium publications in regard to this subject. Most all of the reasons advanced in these writings as to the cause do not stand up to close inspection in relation to what has occurred in my own experiences or to those of other breeders with whom I have discussed this subject. By the process of eliminating the various probable causes one by one as they appear in these articles, we soon arrive at a point where almost everything is purely conjecture. No concrete proof as to which factor is the culprit in producing splits is ever evidenced. I sometimes wonder if a single factor is the cause or whether a combination of several conditions may bring about the split.

If, by now, you are expecting me to offer you the solution, or cure, I will surely be a disappointment. All I can honestly offer is a few comments on some of the proposed causes already advanced, some of my opinions as to their validity, and a few thoughts of my own as to what may be the reason for this exasperating condition.

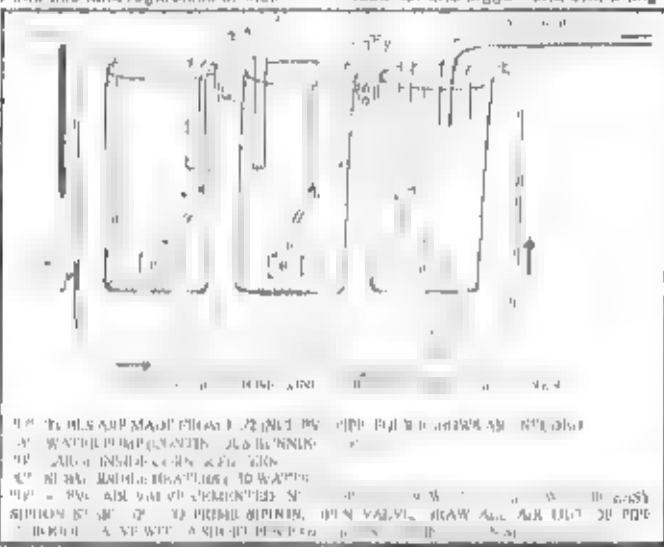
A (WATER) CHANGE FOR THE BETTER

By Stephen H. Smith
Executive Guppy Association
South Jersey Guppy Group

Whenever you approach an aquarium guppy show or an aquarium club meeting, sooner or later someone will surely ask you how you are able to raise such big and beautiful guppies. They ask me for all those secrets that I must be hiding. Well, the first thing I tell them is that they must make a commitment to a maintenance schedule that they are able to work into their life style. You see, there is some work that is required to raising good show worthy guppies.

One of the most important parts of the hobby is consistent water changes and sure if you look at the top ten articles they will tell you the same thing: you must do your water changes. This means you must remove a portion of tank water from the bottom of the tank and replace with new dechlorinated water. The amount of water you remove depends on how often you will repeat this process. The water used to fill my tanks, whether to replace or to fill a few tank mates from the same source, is only aged water, not tap. This system involves three thirty gallon garbage pails which are constructed of "U" tubes. Each pail has a slide box filter and a 60 liter heater, a 60 liter filter (with out the

bag) as a water pump to circulate the water from the pail on one end and pump the return into the first pail. Heat this water to about 75-78 degrees Fahrenheit. I have found over the years that the fish react better if the water is a bit warmer than their own. With this system, the water actually breaks down and completely cleans and then aerates up a new tank with a prime flow filter and ten minutes later put fish into this tank regardless of their



age. Every six months, clean all three box filters, and once a year tear down and pull at a time over a five day period and clean each pail

thoroughly. My tap water is fairly soft and has a pH range of about 7.0-7.2. Of course, if you have water that is unsuitable for your guppies you may have to make a few adjustments to suit your needs. This may be accomplished with water conditioners, pH stabilizers or buffers. A little experimenting by the hobbyist may be all that is necessary.

I will guarantee you will have a noticeable improvement within six months and your guppies will be healthier and bigger and swimming

with a smile rather than a frown. I would also highly recommend to everyone to get a hold of the January 1993 issue of Guppy Roundtable and read the article by Beverly Dixon. This article is one of the best explanations dealing with a host of problems encountered by most hobbyists, both advanced and novice. Ms. Dixon explains the importance of water changes and its effects on fish, as well as pointing out the mechanics of the gills and how these organs play in keeping the health of fish in a controlled environment. My congratulations to the newsletter editor for locating this very important article.

TRIBUTATIONS OF A NOVICE GUPPY BREEDER

By Margaret Ann Rodriguez, Ph.D.
Pan Pacific Guppy Association

Raising guppies is a new hobby for me, and this year had my first experience in shipping guppies to a bowl show. This event was a memorable learning experience which prompted me to write this article.

With some rapidation, I bagged my first guppies, a total of nine females. After the shipping box was styrofoam and sent my guppies (with kisses and best wishes) on their way to their first show. For days after shipping the guppies, I worried about the fish. Did the guppies get cold or too hot? Were they shipped to the right address and would they arrive in time to be shown? etc. etc. etc.?

I hoped to receive my fish from the bowl show on Tuesday following the judging competition, but I did not receive them until Wednesday. Quickly, I opened the box and got my first look at the guppies shipped back from the show. It was not a

pretty sight. One fish was dead. Three fish were very sick, the rest appeared healthy. Thinking the sick fish were simply suffering from stress due to shipping and the high ammonia content in the bags, I put the fish back into their original tanks. I thought by returning the fish to their "happy home" they would quickly recover and fish already in my tanks were healthy so they could resist any problems brought into the tank. Wrong, wrong, wrong.

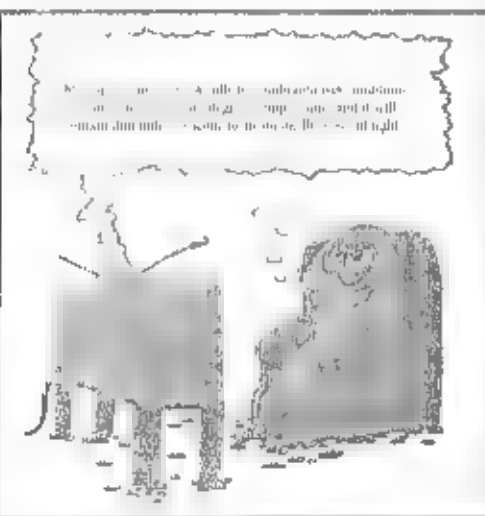
By the next day, two additional fish had died. On that day, I did a partial water change. On the 10th, in all my tanks, using the same siphon hose to clean the bottom of the tanks. The reality of my situation became apparent on day four when I noticed sick fish in many of my tanks. It was obvious that due to my carelessness and ignorance, had spread the disease to a few fish in most of all of my tanks.

The moral of this sad story is, if you can not afford to lose a fish, do not send it to a show.

The medication proved effective with more than eighty percent of my fish surviving. Interestingly, I noted that some strains of guppies were more susceptible to the infection than others. This of course implies a difference in the immune systems ability to fight the pathogen. Without going into the painful details, let me confess I had to medicate all my tanks through two or three cycles because I reinfected the tanks. I am too embarrassed to explain how spread the disease, but let me just say I was lack of experience, stupidity or a combination of both.

As a biologist, I was extremely interested in putting a name on the organism that created such havoc in my guppy population. Taking a toothpick, carefully removed slime from the body and tail regions of dead fish. From this material, I made both a wet mount and a gram stain under the microscope. I saw an abundant number of several types of bacteria, therefore my results were inconclusive.

(continued on page eight)



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than they will if they are fed a balanced diet. If you are feeding a separate tank, it is important to have a separate tank for the fry. If a extra food which will sink but will not be eaten will be in the fish tank, it will be a problem. If you are feeding a separate tank, it is important to have a separate tank for the fry.

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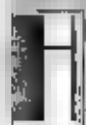
There is a lot of talk about the fry. If you are feeding a separate tank, it is important to have a separate tank for the fry. If a extra food which will sink but will not be eaten will be in the fish tank, it will be a problem. If you are feeding a separate tank, it is important to have a separate tank for the fry.



Stomachs during the hours of darkness. We have seen many batches of young fish raised on dry food alone without a shrimp. Almost with it exception these fish are small, undersized adults. In our experience, when shrimp is fed to the same age.

This is some diet is continued for the whole six weeks. It is only the once but the amount of food fed is very small. One has to be very careful.

ARE YOU BEFUDDLED, CONFUSED AND MYSTIFIED?



If you have a problem or question regarding fancy guppies, the exciting new monthly feature of Guppy magazine, making its inaugural appearance in August 1993, will be a column entitled *Some of This, Some of That* wherein the subscriber's questions will be answered by two of his country's leading breeders of fancy guppies, PAUL GOROK and JOHN SHUBEL.

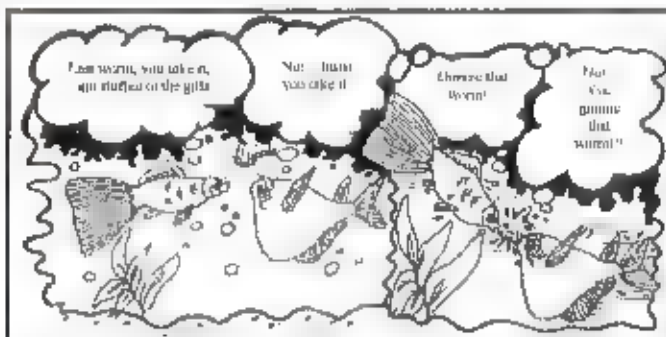
Hope forward on questions.

New England Fancy Guppy Association
PAN PAC GUPPY ASSOCIATION
3619 Alameda Avenue Unit 8
Los Angeles, California 90034

It should never be thought of as an extra. We have also seen the young guppies will be a problem. If you are feeding a separate tank, it is important to have a separate tank for the fry. If a extra food which will sink but will not be eaten will be in the fish tank, it will be a problem. If you are feeding a separate tank, it is important to have a separate tank for the fry.

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disease preventive. The water is aged to two days at least with both filter and lights operating, next the temperature is checked, finally the fish and scavenger snails are added by floating their container until temperatures are equalized. We prefer a used ramphor snails for this job as they multiply fast and have large appetites. Every week one third of the water is siphoned off picking up the bottom sediment, since there are no plants or gravel this is not a difficult task. We replenish this water from a twenty gallon supply of aged water kept specially for this purpose ready for use at all times. Because the salt is already added the amount put back into the fry tanks is equal to the amount removed by siphoning, therefore no salt build up occurs. We should go on and make a tank cloudy by overfeeding we change water more often. These constant water changes do not have the slightest effect on the fry in fact they seem to thrive on it. However we must call to mind that we are not speaking of older fish and water changes for them on this basis could have adverse effects.

Our entire philosophy regarding tank maintenance could be summed up as follows. If it is not here it can not cause trouble. Hence we try not to overfeed, we clean filters regularly, we do not use plants or gravel as we feel these only collect dirt. We use only clean sterile nets which are rinsed in scalding water after each use to destroy bacteria. Our brine shrimp

hatching bottle are rinsed scrubbed and scalded after each hatch, a piece of steel wool on the end of a stick does a nice job of this.

By disciplining ourselves to adhere to these methods of maintaining cleanliness, our guppies have evidenced surprisingly good growth in these early weeks. Attaining one inch at four weeks and one and a

half inches at six weeks again much depends on the strain we are working with and these figures should not be taken as more than a general guide. At six weeks of age they are again moved to more spacious quarters and their diet adjusted for sustained growth. It is well to note that from four weeks onwards male fish tend to slow up in their food requirements and do not consume as much as females, so it is wise to watch out for overfeeding problems at this age. Fry seem to have a built-in resistance to disease at least we have not run into many problems along this line and the foregoing methods do not seem to be at all detrimental to the fry. We are more than happy with the results obtained thus far and are satisfied that any newcomer to the hobby can safely follow these instructions and successfully raise a batch of fry into potential show quality fish. Use your own judgment and you will not be disappointed.

New England Fancy Guppy Association

New England Fancy Guppy Association HOSTS SECOND ANNUAL ALL SPECIES AUCTION

The New England Fancy Guppy Association proudly hosts their Second Annual All Species Auction, featuring three guest speakers, on August 22, 1993 located at:

INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS
1000 Main Street
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Watertown, Massachusetts 02154

World renowned breeders of fancy guppies from around the country have donated lots of top breeding stock for auction. This FREE ADMISSION event is open to the general public who are cordially encouraged to attend the auction and seminars. Prior to the auction, guests will be afforded all opportunity to view the various strains of fancy guppies on display in drum bowls including an incredible 1000 of the bloodstreak phantom and a number of blue and white accepted in color and by mail. Scheduled events include:

- 9:00 - 9:45 AM Lee F. Riley, R. Tetra, surrealist watercolor artist, "Guppies and Their Relatives"
- 10:00 - 10:45 AM Scott Friedman, Tetra Sales USA
- 11:00 - 11:45 AM Marilyn Johnson, International Fancy Guppy Association "Guppies: Why Not?"
- 12:00 - 2:45 PM Inspection of Auction Items
- 3:00 - 5:00 PM GIANT AUCTION OF FISH AND EQUIPMENT

For further information or directions please contact: Bill Simons (508) 887-4031, Jim Russell (508) 566-7524, or Mary Hasky (508) 757-5303.

WALKING THE PLANK

By Frank Ortega

Today is Monday, May 17, 1993. This past weekend I attended the Michigan Guppy Breeders Show. Like always, came home super charged up, not just about guppies, but about the future of the International Fancy Guppy Association.

As you know we have voted in a new slate of officers, and it was encouraging to see how enthusiastic and serious they are about their responsibilities. If the International Fancy Guppy Association were on the stock market, my advice would be to BUY! I predict we will see a very good growth rate over the next two years.

The meeting held Saturday afternoon brought about some major changes that everyone present agreed on. For the first time as far as I can remember the International Fancy Guppy Association is becoming very aggressive toward catering to current and new members needs. There seems to be a renewed pride in breeding guppies, and being part of an International

Fancy Guppy Association club. A lot of credit for the club pride has to go to Guppy Associates of Milwaukee, for years now they have led by example. We have all noticed how they come to shows as a club, proudly wearing their club shirts. Now other clubs are picking up on that, several clubs this weekend wore shirts with their club names and logo. It is very exciting, know I am going to work at building interest back up in the Cleveland area.

only had time to stay for part of the auction, but the pairs and trios

...and last but not least, a sad farewell to our current editors

of young breeding stock guppies were going for top dollar. And that is very good for the hobby. If shows people are very serious about breeding fancy guppies and are willing to pay for quality breeding stock. Stop and think about the guppies that were auctioned Sunday they cannot be purchased at a retail pet shop. These are guppies from highly developed strains with years of

show. It seems every show has its own personality. Some shows the hospitality room, while others it may be a controversy over the judging or maybe a fishroom tour. This show was a throw back to years ago and I mean that as a compliment and in a very positive way.

The "personality" of this show was GUPPIES. Everyone talked and exchanged ideas on guppies, feeding, fishrooms, and developing strains. This was not just a few people but everyone in general. For the first time in a long time we ended the hospitality room sitting outside Mike Brewers room talking guppies.

The person who really kept the long day conversation going was Steven Kwiatler. You can tell Steve loves guppies by listening to the enthusiasm in his voice.

Steve comes to shows to see show and talk GUPPIES. Steve Kwiatler loves talking GUPPIES and is very willing to explain his methods on feeding or daily maintenance in his fishroom. To hear a breeder of Steve's caliber talk is invaluable. This is why constantly encourage new people to attend shows.

And last but certainly not least is a sad farewell to our current editors, Leroy and Rose McCready. As you may have read in the April 1993 bulletin, Leroy and Rose have recently opened a full time pet shop. The work load of owning your own business is tremendous, and it is impossible for them to continue doing the bulletin. I know there are no excuses, but I am sorry I did not write more articles this past year. THANK YOU, Leroy and Rose for all of your hard work and efforts. Just make sure you use your spare time on your guppies. We love seeing you at the shows.

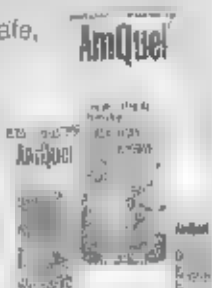
work into them, you cannot put a price on that.

This brings me to my next subject, the theme of his

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BREEDING, FEEDING, AND WEEDING

By Robert Fisher
Ontario, Canada

Unheard numbers of excellent articles have been written concerning the breeding and feeding of good show stock guppies, but to my knowledge not too much has been said about weeding or culling as most people can't. Culling is as much a part of guppy breeding as diet, environment or water conditions. In fact culling is as essential to fancy guppy breeding as water is to fish in general.

A few months ago during a trip up to Toronto for the "Red" guppy show I was a friend of ours who sat me to thinking with a very simple comment he made in my home.

He said, "The best friend any guppy breeder has is his net." And the more I thought about this observation, the more of the truth of it began to sink in. My reason I went something like this, "What on earth is the use of breeding and feeding up a whole lot of inferior fish? Isn't it far better to raise only the best of the best? Surely this way, a breeder just has to come up with fish that can win shows."

So out came the net and I went to work on the tanks with gusto. Any fish that did not measure up took the long swim. My tanks soon looked so bare that I began to get worried for fear I had done the wrong thing, but slowly ever since then the tanks began filling up again with the kind of fish I had

only dreamed of before. Still have many inferior guppies and most probably always will have. However looking back over the past six months, believe that in general my stock has improved vastly and credit the whole thing to the weeding out that took place months ago.

The reasons for culling are very simple. One makes up his mind that he is going to raise good guppies, no matter what, and proceeds to make a move in that direction by pitching out all those fish in his tanks that fail to exhibit all the desirable features he is looking for. Now it is at this point that a great number of hobbyists fall down on the job. People form sentimental attachments for pets and so it is very hard for some folks to be ruthless, and get rid of those luckless specimens which through

continued on page fourteen

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no fault of their own, etc.," quite as good as other fish. Unfortunately, there is no other course to take if we are after a prize winning strain. The only other alternative is to pass them along to someone else, or to the local pet shop, but the main thing is to get rid of them so they are not able to pass along their defects to the next generation. As most experienced breeders are well aware, most guppy defects such as diminutive size, off color, crooked and bent spine is a genetic defect, and it is only logical way to get rid of these defects is to prevent the fish possessing them from breeding, and passing along the defects to the offspring. So far, no defects have had to cope with in the last few years have been observed in the same defects have consistently cropped up in guppies and guppies. I have noticed that my own worst enemy is regard to failing to rid my tanks of

original fish in which the defect was first manifested, would not care to even try to estimate just how many dollars it has cost me to feed all those culls. Yet I was not sensible enough to recognize my errors until recently. This type of thing happens to us all, but perhaps these dreadful experiences can be of help to others who may be suffering from the same frustrating thing right now.

Another reason for culling is to prevent a population explosion, which as we all know can happen very easily with guppies. I know of few breeders who do not complain about lack of tank space. For some strange reason we always try to keep all the babies we get, and then are it is not long before our tanks are so crowded with fish we have a real time finding room for

more. When this happy situation develops, culling provides the answer. It helps to clear out all the runts and cripples to make room for better fish to have enough room to develop in. I wish to raise superior show stock guppies, then our tanks should be devoted to this

To be successful in the hobby of breeding fancy guppies, the breeder must ruthlessly cull

purpose, and highest priority should be given to the fish we feel have the most promise. One cannot sacrifice his valuable tank space raising a bunch of culls.

Now we must pass on to the topic of culling. Knowing what to cull and when to do it is extremely important. Every breeder has his own methods and usually almost every strain of guppy nurtured in a different manner. It would be quite difficult for anyone to say down hard and fast rules. However, it is possible to insist it a general guide which might be of help to the novice.

A breeder and likes in the breeding with a single pair of carefully chosen parents. This is culling taken to its ultimate degree. For once the breeding pair have been selected, the breeder must not drop his culls. Now do not misinterpret by this that they should be discarded. What I am saying is not as far as the future of this strain is concerned, they will have no part in it, and thus are automatically classed as culls. What the breeder does with them is his own choice. Some of the males not used for breeding could very easily be the best show stock available. If they are from a good strain, many of them will probably be sold off to other hobbyists as breeders. To the man who raised them, however, they are still his culls, because they are less than the best

(Continued on page fifteen)

The ultimate object of culling is to remove undesirables from the breeding tank and this has to start at a very early age. The first to go should be all the obvious genetic mistakes, the deformed cripples, the runts, the freaks, and any other "less than perfect" fish. For my own part, I do this at about two weeks of age when they are big enough to get a reasonably good look at them.

The next stage of culling comes at about six weeks. At this age I expect them to be up to a certain size, any lagging in growth are culled on sight to make more room available for those that will remain. By doing this, I am also sure to get size in my next generation. At about ten weeks when colors are more or less evident and the young fish are approaching breeding age, I now look for those which fail to give the light color combinations at this stage. If dorsals and caudals fail to match out, they go. When the caudal is developing at age three months, watch for those fish which fail to develop a good spread. I generally put these aside since the spread may develop later.

By this time the drop of young fish has dwindled to less than half the original number, but those which remain represent the very best of the drop. From this stage on, culling has to be on an individual basis. A female which fails to become pregnant after a couple months is culled because of sterility. A male that develops a ragged tail is culled for lack of symmetry, and so it goes until only a few prime show stock are left. Generally try to get several batches of fry from these before asking them to shows, since they are to be the parents of my next generation, give them extra special care and so far have been well rewarded for the effort.

How is a splendid example of ruthless culling. A few months ago, I was engaged in breeding a new multi-color strain. Altogether, I collected twenty full patches of fry over a period of about four weeks. The average size of each batch was about fifty fish, meaning that I had some thirteen hundred fry in all. Several batches were dumped before three weeks as being completely worthless. Others were dumped during the following weeks until in four months only

about fifty percent of the original babies remain, about one hundred fish. In other words, only eight percent of the original hundred were good enough to measure up to my exacting standards. Many of these were sold off to pet shops, donated to the clubs or sold to hobbyists, and the vast majority simply were placed in plastic containers half filled with water and placed in the freezer. Not because I am hard hearted or get some sadistic delight from freezing fish, but because I know that if I do not do this, I will never be successful in raising a top quality strain of guppy.

I have had folks visit my home to buy guppies, and often they have "collected" them for free. Occasionally people did not want

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to pay a reasonable price for my but what they failed to realize is that several fish had to pay a minimum sacrifice of about one hundred fish. If they were buying, they'd have to pay for quality specimens. To raise just one really good fish is often necessary to cull ten others. I think it is fairly safe to say the more ruthlessly a breeder culls, the better his stock will improve. So remember, attachments for individual fish are fine but make sure the one you are attaching to is the best of the bunch, and a sure to be a culling the longest.

A strain of good guppies can and will improve with each successive generation, providing the breeder makes sure that all inferior fish are out of the picture and only prime specimens permitted to carry the strain forward. If you have added up your mind to breed good guppies then do not delay, it is inevitable, get out the net and dig in. You will be doing both you self and the guppies a good turn.

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MESSAGE FROM THE PRESIDENT

In the last few months we have brought about a great deal of change in our organization. We have changed the point system to encourage improvement in the quality of fish at the shows. We have changed the yell classes and standardized the point systems.

We expect for you to contribute to the club by providing information for the newer breeders.

On behalf of the entire International Fancy Guppy Association, I would like to thank Leroy and Rose McCreary for their efforts in publishing the bulletin. It is a very difficult job requiring a great deal of time, effort and support. No one

else has worked harder for the IFGA in the past two years. I would also like to thank Dick Schardt for doing an excellent job as membership chair for the

and John Allen for running the Clearing House.

I am sure there will be a few rough moments in dealing with these changes. Helpful suggestions are always appreciated and remember, this is a hobby, not brain surgery and every guppy dies in less than three years.

The fastest way to success in the guppy hobby is also the least expensive and most overlooked: hard work. Cull, scrub and sterilize and you will soon see large, vigorous guppies cropping up out of what you thought were mediocre fish.

A word about purchasing or trading fish. Do not expect to get show fish in the bag. Most breeders ship young fish with potential. Give them time to grow up. Raise a couple generations before you pass judgment on the fish. Different breeding techniques and rearing conditions can greatly alter the development of the fish. Used also can fish from Frank Chang's fishroom to make some of the best crosses I have ever made.

Many of these changes are outlined in Paul Gorski's articles in last month's bulletin. These changes were much needed to bring our organization into the 1990s.

There are many people interested in raising fancy guppies. With the proper nurturing and work by our members, our organization can really grow. We have sent out approximately thirty free lines of fish to new members of the IFGA. Everyone was very appreciative. It has been a good experience. There are two things that new members need:

1. Good quality, healthy fish to get started.
2. Information on what to do with them after they receive the guppies.

In the past, our organization has not been very efficient at distributing information on how to raise show fish. There are many breeders with an immense amount of knowledge

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AWARD POINTS

By Rudy Marzban
Green Valley Guppy Association

Inst of all, a hearty welcome to all the new names and faces at the shows. Some of the newer people have requested an explanation

of how the points are figured. Details of points are explained in the International Fancy Guppy Association publication entitled *Judging Rules and Standards* and may be purchased for the modest sum of \$3.50. This book is a must if you are going to show fish.

For those who do not have the book, I will attempt to explain the current point system. The following is the point listing for basic award

points. (Table One) These points are then multiplied by the number of points the show qualifies for which are either five, six or seven. Since we never have anything but seven point shows, this will be used in the following example.

First place through fourth place finishes count in the class entered toward class championship. First and second place finishes only count toward Grand Overall - Male or Female. The exception to this is Best of Show categories; all four place finishes (first through fourth) count toward Grand Overall.

Now for our example: Let's say you entered two single red deltas and won first and third place and

TABLE ONE

	TANK	FEMALE/MALE SINGLE	BREEDER MALE	BREEDER FEMALE
First	40	10	20	20
Second	32	8	16	16
Third	24	8	12	12
Fourth	16	4	8	8

TABLE TWO

RED DELTA

First Place 70
Third Place 42

RED DELTA TANK

Second Place 112
Third Place 84

BEST OF SHOW

Third Place 105

your first place red delta was awarded third place Best of Show Delta. You also entered two tank entries in red delta and won second and third place. An itemization of your points is listed in Table Two. Your total points accumulated toward red class champion would be 308. Your points toward Grand Overall Male would be 287 (Best of Show categories do not count toward color class).

This has been a brief explanation of award points, and by no means is everything covered. Now that you have this part firmly in your mind, get ready for a new points system just voted into effect at the Michigan meeting. More on that in the near future.

The proposed show schedule for next year to be voted on at the Annual Show hosted by Chicago Association International of Chicago the weekend of November 6-7, 1993, is as follows:

SECOND HALF 1993-1994 SHOW SEASON

HEARTLAND GUPPY CLUB

April 30 - May 1, 1994

GATEWAY GUPPY ASSOCIATES

May 2 - 22, 1994

COLUMBUS OHIO GUPPY SPECIALISTS

June 18 - 19, 1994 or June 25 - 26, 1994

FIRST HALF 1994-1995 SHOW SEASON

EAST COAST GUPPY ASSOCIATION

July 8 - 7, 1994

PAN PACIFIC GUPPY ASSOCIATION

August 6 - 7, 1994

NEW ENGLAND FANCY GUPPY ASSOCIATION

August 27 - 28, 1994

GUPPY ASSOCIATES INTERNATIONAL OF CHICAGO

September 7 - 8, 1994

MICHIGAN GUPPY BREEDERS

November 4 - 5, 1994

We regret to inform you Bill Orth has resigned from the Judging Board but will remain an accredited judge of the International Fancy Guppy Association.

Paul Gorski

AWARD POINTS STANDINGS

1982-1983 SHOW SEASON: ACCUMULATIVE TOTALS THROUGH MAY 16, 1983

ALBINO MALE	AOC MALE	AOC BI-COLOR MALE
1 Bill Klein 1,380	1 Joseph Rosenberry 2,582	1 Steven Wall 2,912
2 Rudy Marshburn 858	2 Frank Barla 638	2 Jim Wika 400
3 Mark and Pam Lewis 480	3 Tyrone Burgess 252	3 Rudy Marshburn 480
4 Dwight Parlon 392	4 Steven Kwahtler 82	4 Rich Plawochi 322
BLACK MALE	BLUE MALE	BLUE/GREEN BI-COLOR MALE
1 D and K Huff 1,738	1 Bryan Chen 1,344	1 L and R McCreary 1,000
2 Tim Peters 376	2 Bill Kwahtler 1,000	2 Rich Plawochi 252
3 Steven Bialkowski 320	3 Tom Joffe 532	3 Rudy Marshburn 252
4 Mike Busch 288	4 L and R McCreary 448	4 Mike Straski 238
BRONZE MALE	GOLD MALE	GREEN MALE
1 Tom and Pat Allen 2,014	1 vanDenLingenberg 3,854	1 Jim Alderson 2,208
2 Gene Gollmowski 294	2 Roberto Delacruz 70	2 John Russell 1,314
3 J and B Thale 112	3 Rudy Marshburn 70	3 L and R McCreary 378
4 Keith Gollmowski 56	4 Dennis Brown 28	4 Tom and Pat Allen 224
HALF-BLACK AOC MALE	HALF-BLACK BLUE MALE	HALF-BLACK PASTEL MALE
1 Steven Kwahtler 3,024	1 Jim Alderson 2,072	1 Jim Malar 3,730
2 Jim Alderson 798	2 Rich Plawochi 378	2 L and R McCreary 448
3 Gary Mousseau 210	3 Ann Rodriguez 364	3 Dan Kwahtler 308
4 L and R McCreary 184	4 Dan Brown 34	4 Jim Russell 252
HALF-BLACK RED MALE	HALF-BLACK YELLOW	MULTI MALE
1 Jim Alderson 2,746	1 Jan Dwyer 3,484	1 Dan Whilmer 1,302
2 Vernon Smith 104	2 E and M Bryant 2,002	2 Bob Williams 894
3 Thomas Thale 308	3 Gary Mousseau 350	3 Ruby Straker 154
4 Terry Wasylyk 282	4 Rich Plawochi 210	4 Jenny Magnifico 140
PURPLE MALE	RED MALE	RED BI-COLOR MALE
1 Gary Mousseau 212	1 Gary Mousseau 2,874	1 Dan Whilmer 714
2 Tom and Pat Allen 1,078	2 Jim Alderson 812	2 A and R Wagner 814
3 Terry Wasylyk 280	3 L and R McCreary 798	3 Bob Williams 814
4 Ramon Jovani 182	4 Alan Hubert 252	4 Vernon Smith 420
SNAKESKIN SOLID MALE	SNAKESKIN VARIATED	SWORDTAIL MALE
1 vanDenLingenberg 1,908	1 Mike Brower 28	1 Steven Wall 3,700
2 Frank Barla 4154	2 David Weller 448	2 John Allen 2,228
3 R and B DeVono 238	3 L and R McCreary 420	3 Tom Joffe 140
4 Tyrone Burgess 324	4 Bill Klein 376	4 Dan Kwahtler 384
YELLOW MALE	JUNIOR OVERALL	NOVICE OVERALL
1 vanDenLingenberg 2,876	1 Andy Busch 118	1 Joseph Wika 308
	2 Keith Gollmowski 866	2 Jim and Brenda Thale 1,000
	3 Dan Parlon 98	3 David Wall 814
	4 Jenny Abadgo 98	4 M and M vanNest 98

ALBINO FEMALE	AOC FEMALE	BLACK FEMALE
1 Mike and Pam Lewis 840	1 Mike Brower 318	1 Thomas Hale 698
2 M and M Gollmowski 322	2 Rich Plawochi 98	2 Jim and Brenda Thale 108
3 Gene Gollmowski 140	3 Dan Whilmer 40	3 Tim Peters 58
4 Joffe 70	4 Rudy Marshburn 126	4 John Allen 56
BLUE/GREEN FEMALE	BRONZE FEMALE	GOLD FEMALE
1 Mark and Pam Lewis 530	1 Tom and Pat Allen 798	1 Frank Barla 828
2 Dan Whilmer 230	2 J and B Thale 400	2 Rudy Marshburn 224
3 Frank Barla 66	3 A and R Wagner 70	3 Rich Malar 10
4 Tom and Pat Allen 154		
HALF-BLACK AOC FEMALE	HALF-BLACK RED FEMALE	RED FEMALE
1 M and M Gollmowski 360	1 J and B Thale 184	1 Frank Barla 560
2 E and M Bryant 336	2 John Woff 98	2 Jim and Brenda Thale 108
3 Mike Brower 182	3 Frank Barla 58	3 Elsie and Marie Bryant 254
4 Mike and Pam Lewis 162	4 Mike Aradgo 84	4 M and M Gollmowski 106

GRAND OVERALL MALE

1. Jim Alderson 12,644
2. Bob vanDenLingenberg 8,862
3. Gary Mousseau 5,580
4. Jim Malar 4,800
5. Steve Wall 4,622
6. Tom and Pat Allen 4,084
7. Larry and Rose McCready 3,801
8. Stephen Kwahtler 3,080
9. Joseph Rosenberry 2,714
10. Jeff Dennis 2,422

GRAND OVERALL FEMALE

1. Mark and Pam Lewis 2,708
2. Frank Barla 1,447
3. Tom and Pat Allen 1,182
4. Mike Gollmowski 1,158
5. Mike Brower 973
6. Thomas Thale 868
7. Jim and Brenda Thale 784
8. Dan Whilmer 707
9. Elsie and Marie Bryant 627
10. Andy Busch 600

BREEDER MALE

1. Jim Alderson 3,024
2. L and R McCreary 1,040
3. Rich Plawochi 818
4. Steve Kwahtler 224

BREEDER FEMALE

1. Mike and Pam Lewis 840
2. M and M Gollmowski 790
3. Thomas Thale 478
4. Tim Peters 252

OFFICIAL INTERNATIONAL FANCY GUPPY ASSOCIATION SHOW RESULTS

HEARTLAND GUPPY CLUB JUNE 8-9, 1983 - THREE HUNDRED FORTY EIGHT ENTRIES

BEST OF SHOW TANK, NINETEEN ENTRIES

FIRST PLACE	SECOND PLACE	THIRD PLACE	FOURTH PLACE
Jim Malar Half-Black Pastel	Jim Alderson Green Delta	J and J Magnifico Half-Black AOC	Edgard Chasson Novice

BEST OF SHOW MALE DELTA, NINETEEN ENTRIES

FIRST PLACE	SECOND PLACE	THIRD PLACE	FOURTH PLACE
Jim Malar Half-Black Pastel	Davidens Tait Novice	Davidens Tait Blue/Green Bi-Color	Stephen Kwahtler Half-Black AOC

BEST OF SHOW MALE SWORDTAIL, SIXTEEN ENTRIES

FIRST PLACE	SECOND PLACE	THIRD PLACE	FOURTH PLACE
J and J Magnifico Half-Black AOC veil	Steven Wall Single Swordtail	Dwight Parlon Albino veil	Randy Holmes Half-Black Blue veil

BEST OF SHOW FEMALE, NINE ENTRIES

FIRST PLACE	SECOND PLACE	THIRD PLACE	FOURTH PLACE
Tim Peters Black	Elsie and Marie Bryant Half-Black AOC	Gene Gollmowski Albino	Mike Brower AOC

BREEDER MALE: FOUR ENTRIES

FIRST PLACE	SECOND PLACE	THIRD PLACE	FOURTH PLACE
Gary Mousseau	Gary Mousseau	Jim Alderson	Jim Alderson

BREEDER FEMALE: TWO ENTRIES

FIRST PLACE	SECOND PLACE
Elsie and Marie Bryant	Elsie and Marie Bryant

ALBINO DELTA

(Five Entries)
1. Mark and Pam Lewis
2. Gene Gollmowski
3. Mark and Pam Lewis
4. Gene Gollmowski

ALBINO TANK

(Two Entries)
1. Bill Klein

ALBINO VEIL

(Ten Entries)
1. Dwight Parlon
2. Dwight Parlon
3. Dwight Parlon
4. Dwight Parlon

AOC DELTA

(Two Entries)
1. Joseph Rosenberry
2. Joseph Rosenberry

AOC TANK

(One Entry)
1. Joseph Rosenberry

AOC VEIL

(One Entry)
All Entries Disqualified

AOC BI-COLOR DELTA

(Three Entries)
1. Steven Wall
2. Dennis Brown
3. Disqualified

AOC BI-COLOR TANK

(No Entries)

AOC BI-COLOR VEIL

(Three Entries)
1. Stephen Wall
2. Mike Straski
3. Disqualified

BLACK DELTA

(No Entries)

BLACK TANK

(Two Entries)
1. Steve Skalkowski
2. Steve Skalkowski

BLACK VEIL

(Four Entries)
1. Steve Skalkowski
2. Disqualified
3. Disqualified
4. Disqualified

ALBINO FEMALE

(Eight Entries)
1. Gene Gollmowski
2. Gene Gollmowski
3. Mark and Pam Lewis
4. Mark and Pam Lewis

AOC FEMALE

(Seven Entries)
1. Mike Brower
2. Tim Peters
3. Tim Peters
4. Jim and Brenda Thale

BLACK FEMALE

(Three Entries)
1. Tim Peters
2. Tim Peters
3. Tim Peters
4. Jim and Brenda Thale

BLUE/GREEN FEMALE

(Seven Entries)
1. Dan Whilmer
2. Randy Holmes
3. Randy Holmes
4. M and M vanNest

BRONZE FEMALE

(Three Entries)
1. Jim and Brenda Thale
2. Tom and Pat Allen
3. Tom and Pat Allen

JUNIOR FEMALE

(Three Entries)
All Entries Disqualified

HALF-BLACK AOC FEMALE

(Seven Entries)
1. Elsie and Marie Bryant
2. Mark and Pam Lewis
3. Elsie and Marie Bryant
4. Mark and Pam Lewis

HALF-BLACK RED FEMALE

(One Entry)
Jim and Brenda Thale

JUNIOR FEMALE

(No Entries)

NOVICE FEMALE

(Eight Entries)
1. Edgard Chasson
2. Edgard Chasson
3. Edgard Chasson
4. Dan Cartright

RED FEMALE

(One Entry)
1. Jim and Brenda Thale
2. Jim and Brenda Thale
3. Dan Whilmer
4. Dan Whilmer

JUDGES: Jamey Magnifico, Gary Moussey. ASSISTANT JUDGES: Reginald Jay Ren DeJure, Bel, Rime Disk Scherdt, Jim "Kale"
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International Fancy Guppy Association News Section

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COMPATIBLE STRAINS THE BLUES AND HALF-BLACK BLUES

By Jim Jensen, President
International Fancy Guppy Association

Many lines of guppies can be interbred with great results. Breeding with blues and half-black blues will have an advantage over the breeds who quack at you. It is a simple line of 16 to 32 chromosomes. Usually cross the blues and the half-black blues to improve the half-black blue line. It will breed better and produce blue lines to improve the blues.

When dealing with half-black fish the first thing you must try to establish is where the half-black gene is located. You have three possibilities: 1. X-linked on one of the male chromosomes, 2. Y-linked on the male chromosome, or 3. autosomal linked on another chromosome that does not govern sex. At this point, I will assume the half-black body color is Y-linked. All the males will have a half-black body and all the females will lack the half-black pattern. This is rarely the case. Most of the half-blacks are X-linked dominant or autosomal dominant.

This means that if you breed a half-black blue male and a blue female you will most likely get blue males and half-black blue females. Every time of guppy is different, so you must determine the inheritance pattern of your own fish. Based on my experience with half-black lines, this appears to be the case most of the time.

Now we can begin to work this into

to produce bigger and better half-black blues. There are two ways to proceed. First you can cross a half-black male to a blue female. As stated earlier you will get blue males and half-black blue females. The blue males will probably be better. Now cross the F1 half-black blue females back to the males from the half-black blue line. The resulting offspring should be superior to the half-black blues you started with. Two words of caution: when using his method, use the males with the darkest body color. It is worth for when streaks or other signs of color irregularity in the caudal.

The second way to make this cross work is by crossing a large vigorous blue male to a half-black blue female. You should get all half-black blue males or fifty percent of half-black blues. Throw out all the non half-black blues. Now take the best of the half-black blues and cross them back to the parent line of half-black blues. Take the best half-black blue males derived from the cross and breed the pure half-black blue males to the females of the half-black blues obtained from the cross. You may also breed the pure half-black blue males to the largest of the half-black females obtained from the cross.

Have had the best and fastest results using the second method. Half-black blues are a difficult line to produce without outcrossing to blues. They tend to have fertility problems and develop color variations in the caudal.

Single back issues of *Guppy Roundtable* are no longer available. First twelve issues available in volume bound editions for \$20.00 including all handling and postage charges.

A DISASTER CAN PROVE POSITIVE

By Elvyn Bryant
International Fancy Guppy Association

I was very sorry to read about Ann Rodriguez's losses when she entered her first show that required shipping. But her very fine article shows that something drastic can be beneficial in the entire guppy hobby.

Ann's bad experience can be very valuable to all who want to ship guppies to various shows throughout the United States, and Canada. This article is slow in coming to help Ann put future members can be helped.

Last but certainly not least, do not take the hobby too seriously, have fun

Before you make up your mind to enter the show

of your choice, ask yourself this question "can I afford to lose these guppies?" If the answer is yes, by all means ship. But if the answer is no, do not ship, because the chances are you will lose at least fifty percent of the animals.

I find before each show season begins, have the number of guppies necessary to fill the show season, and if my losses were great I can withstand the losses. You can prepare for the next season by breeding for it in advance. That is the very reason

our great readers have developed the split season, for if you were to lose your guppies early you could breed for the next half.

In St. Louis we have a great advantage over most guppy breeders, we are within eight hours driving time to most guppy shows, and therefore we can drive rather than ship.

The precautions you must consider before and after you ship fish:

1. Assign three small tanks, about five gallon size, to receive your guppies before they come home. Empty each bag carefully into the returning guppy into a net, allowing the old water to run into a bucket. Then very carefully place the guppy into one of the prepared tanks, this water must be treated with your favorite anti-fungal cure. Select the product NOX-ICH because it contains Malachite Green, does not harm your guppies and provides the protection needed to recover from the long time away from home. Do not keep the return water.

2. Do not crowd the container

(continued on page three)

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sense, seven guppies into each container is enough, add an airstone or a small bottom filter. You should be able to treat twenty guppies. If you are entering more guppies in the show, use more containers.

3. Do not feed the first day on the second day tempt them with freshly hatched brine shrimp. If the guppies refuse the shrimp, do not feed any more on the second day. Continue trying to get the guppies to eat, but do not pollute the tank. This will kill them for sure. It is best to have hungry guppies than dead ones.

4. Go into an isolation mode, all nets, buckets, anything used to handle the returning guppies must

be bleached. Bleach is the hobbyist's best friend when containing any outbreak of disease. Some guppies will die. Remember use your nets, and immediately return them to the bleach, take a clothespin, attach it to the side of the tank to secure the net so as to not spread any disease.

5. The following treatment requires approximately five days, the guppies should be opening up, swimming freely, caudals open, looking for food. If they do not repeat the dosage, one drop per gallon. Pray a lot.

6. Keep a sense of humor and keep that bleach bottle handy.

7. You are ready to return your guppies to their tanks. Before you

do, take out all other guppies because they look good is not good enough. You can spread a disease into healthy tanks without you knowing it was being done. After three weeks you can safely add the healthy and returning guppies together, providing there is no sign of disease.

8. Be careful of partial water changes, the weakened guppies may not be ready for a big water change.

9. Get ready for the next show, showing guppies can be very helpful in learning how your guppies compete with the same colors you are raising. And last but certainly not least, do not take the hobby too seriously, have fun.

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GUPPY
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ECONOMICAL, HIGH EFFICENCY FILTER

By A. L. Hayley
Greater Seattle Aquarium Society

All the advantages of a power filter with high aeration value may be had with the simple inside filter as described in this article. There are numerous tanks in use where looks are not of primary importance and which will require more filtration than the average or all time can supply. Some tanks do not lend themselves to the use of an outside filter, such as refrigerator tanks and other non-glass aquariums.

Some of the advantages of the filter described in this article can be readily seen. Since an equal volume of carbon filter medium for cleaner water. High volume of flow, since it is above the water level is not required. Easily adjustable outlet to match water level. Intake is always at the bottom of the tank where it should be. Surface or filter medium cannot be disturbed by finger digging to remove trapped debris.

This filter may be used as a undergravel filter with additional

chemical filtration by burying the intake under the gravel. This would be recommended when used with smaller fishes or some form of screen may be placed over opening to prevent them climbing in or taking

Since an airstone is used in the high aeration is gained at the same time water is exchanged. This has proven to be important to wide circulation in order to help release

guppy gases, other fish to introduce oxygen. This releases guppy gases, guppies more free oxygen to be absorbed by the water.

REQUIRED MATERIAL

Two or four or similar bottles or gallon size, a roughly clear one.

Twelve inch or larger diameter O.D. plastic tube.

An airstone air supply and filter charcoal.

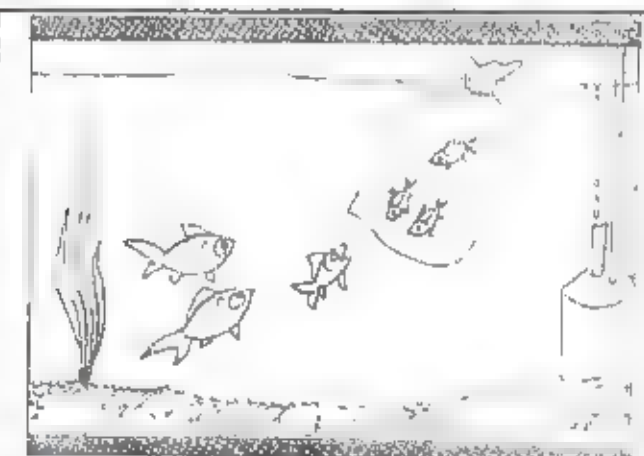
Chinaria bottle Number One should be cut off evenly one-half inch above the base. This will serve as the top or outside portion. Bottle Number Two would be cut off at the indentation near the top of the bottle to serve as the tank portion.

Now you have two bottles of the approximate same size, one of which must be put outside of the tank. By depressing the tank portion of Number Two a groove or channel is made so the it can be slipped inside of Number One and

There are numerous breeder tanks in use where looks are not of primary importance

the opening will continue from top to bottom. The curve of the bottle will serve as the intake for the filter. The bottle will be placed in the tank and all that is above the water level will be outside. This will be the only way to get the bottle into the container.

The one inch O.D. plastic tube (preferably rigid) will exactly fit into the opening at top and should be made slightly longer than the depth of the filter and as much longer as necessary to reach the approximate water level where it is to be used as an inside filter. The bottom end should be sealed with a stopper or other closure to prevent charcoal being picked up and small holes should be made around the lower end of the tube to permit adequate flow of water. Tube may be made from a plastic golf club holder by splitting and re-tiling if desired. With a tight fit of the tube in the bottle, a tiny hole should be made near the top of the bottle to permit trapped air to escape when submerging the filter into the tank.



"The breeder" - We guppies' neighbors

ARE YOU KILLING THEM WITH KINDNESS?

By James Kelly Chapman
Fancy Guppy Society of Great Britain

"Know your enemy" goes the old saying, and it goes without saying that as a guppy breeder you should quickly learn to recognize the signs and symptoms of the different types of diseases of our little friends and pronto to

act. Unfortunately there is one disease that we tend to ignore on our selves and that is fatty degeneration of the internal organs. No warning signs from this

disease, apart from a slightly bloated appearance of the fish and what we call "the belly" is all that is visible until one day we find they have perished.

and sometimes in a mysterious way. More mysterious because it is not that the fish that we have observed our care and attention for so long usually our best specimens and home we like to "show" in the "Best of Show" category.

Taking a slow course this disease is brought about by too much feeding of foods rich in fats and proteins, continuous feeding with "fear" baby brine shrimp or white worm for instance, is a sure way of bringing it about. Another way in which it manifests itself is that it will produce infertility and one does not have to be a serious breeder of guppies for long to realize just how serious this can be.

To help digest these rich foods more and more blood is pumped to aid the organs of digestion in their work consequently the reproductive organs get less and less oxygen and other necessary substances which they normally receive via the blood, therefore it follows that overfeeding

with rich foods will be all right to spawning your fish.

Thank goodness it is not so simple in this respect with guppies as it is with egg-laying species. However, it gives a visible sign apart from the slightly bloated appearance and increased coloration. Does your guppy have a fatty degeneration?

Only autopsy will give you the answer to this question. Or

examining the fish will be difficult to see slightly bloated, but it is not a sign of the disease. It is only when you see the fish's belly that you will be able to tell that they have perished.

not red of a fleshy color. Examining the fish will display white myers (mucous) which may be seen to swell. The belly and spleen become yellow colored bodies and the eye change from a translucent pink to a whitish grey.

I have noticed that in advanced stages of this condition a pus-like substance (usually flecked with blood) is ejected with the excreta. After having lost large numbers of fish under mysterious conditions in the past, I now STARVE my guppies one day per week leaving the lights above the tanks on at the time day and night. This action has the secondary effect of making the fish clear up any food left from the previous feeding and the prolongation of their day gives them much needed exercise to whittle away some of the stored fats.

Try it to yourself, you will be surprised how a tank that has remained dark and filthy, but crystal clear looking after this

clarify by this clearing up process. At six days or so you will be able to see why not give our little charges digestive systems a rest too? Try to eat laxative foods like Daphnia (live) and chopped earthworm which are possible. Sometimes the addition of two or three drops of medical Paraffin Oil added to their food also works wonders.

A lot of word of warning. If you feed live Tubifex to your fish do chop it up either with wire shredders or by a method of placing it worm in a small plunger and a id cutting it up. One with a sharp pull of 50000.

Young guppies in particular if fed whole Tubifex tend to be greedy and swallow a worm far too big to eat whole. Consequently after trying to swallow a worm that was too big to swallow it is then that they can be seen to swallow a completely whole worm and to young guppy chicks a whole

A fellow guppy of the member only describes this "disease" as the "Belly Bloat Disease".

HAVE YOU ANY BILLY BUNTERS IN YOUR TANK?



OVERCROWDING

By Mary Ellen Collins
Editorial from Guppy Roundtable 1992

Numerous controversial articles have been written on overcrowding in your guppy tanks and undoubtedly many more will be written in the future. Just thought I would add my "two cents" to this controversial subject, especially since it is so much a part of my entire fish breeding experience. I started out overcrowding my guppies and in all probability will continue and if you have caught the drift in my previous articles, you would know am for it. By being for overcrowding, do not mean to imply I think it is an ideal solution because it is not. What am going to say is under these crowded conditions, no one will suffer. That is a bit like saying that if you handle a wrong thing right it is okay. Actually that is exactly what am saying. Anyway to make a short story long, my usual style, I shall proceed.

First off you take the problems that go along with overcrowding and carefully eliminate them one by one. The problems are dirty water smashes very quickly accumulation of dangerous gasses, and insufficient food.

My way is certainly no great and wondrous answer to problems, but I am saying it works for me and my award winning guppies are my argument for this. They are terribly overcrowded but they are terrific fish. They are active, alert, grow and sparkle. They have tremendous appetites, clean up their food, they flirt, they pair up and spawn. They fight very little, and they grow quickly.

The most important in my estimation is water changing, and it does not cost you anything but a little time and work. Why spend a fortune on fancy filters who needs them? That is. If you change your water frequently and sufficiently. I now change up to ninety percent of the water in my tanks every two to three days. All you need is a siphon tube, some large buckets, and perseverance. The fish come alive when the water is changed on a constant and massive basis. The only filters I ever use are small in-line box filters cannot see why I should spend money on filters to filter water that will not be around long enough to need filtering. My forty gallon tank sports one in-line box filter yet my water is fine for my guppies since it is changed so often.

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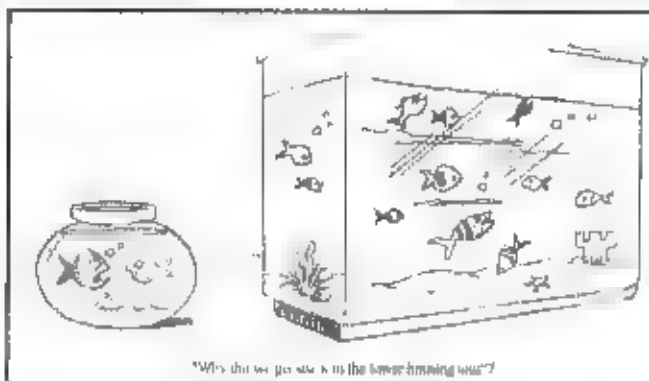
Developed a favorite technique? Made an amazing discovery in effective filtration systems for your guppy breeding tanks, or paste food recipes guaranteed to raise LARGE guppies, or found the keys to unlocking the complexities of guppy genetics? Do not be shy about sharing the secrets of your success. This is the most effective forum for breeders of guppies to meet colleagues and swap your best tips. Write an article for publication in *Guppy Roundtable*.

Artistic? Experienced a funny "fish july"? Sense of humor??? Send in your "fishy cartoons" for publication in *Guppy Roundtable*.

DAVIDENE TAYLOR
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Here again, save money by using only very fine gravel. As it is fine, it is easily washed and it never breaks down or goes bad. Back to the water changing: once the habit finds root in your very soul, it can be done easily, efficiently, happily, and the benefits will surround you. The guppies even accept it. It is routine rather quickly and is not frightened by all this activity.

Another item that is absolutely necessary is the addition of stepped up aeration. I use an extra air line or two with airstones and as the population or size of the guppies accelerates, so do the air lines. No guppies desperately gasping for air with this simple precaution. It is a good idea, I think, to also keep the temperature down. I have always been one of those hobbyists who used the cooler temperatures, usually in the seventy to seventy-two degree Fahrenheit



"Why did we go down to the lower swimming tank?"

range, but if the fish population accelerates, I gradually turn the heat down ever more.

This does not seem to affect the fish unfavorably in any way. My fish have always been fed heavily, four times a day being the minimum and the usual being more. Young fry and growing fish are often fed every two hours since I am in a position to do this as they get eight feedings a day. The fish are in such competition for this food that they eat eagerly all of them. Very little food ever hits the floor of the tank, any little bit floating down has the attention of many fish, trying to grab off that last bit of goodness. Competition has its merits. I have no need for scavengers such as catfish or snails. If should happen to see one, I simply take my trusty old siphon hose and siphon the food into a bucket. I have visual proof of fast growing, vigorous fry when food is generous and water change is massive. It is an unbelievable combination and the size of the tank seems to not deter from their growth in any way.

Another advantage of this water changing is the rarity of disease. How can a disease get a foothold in a tank under these circumstances? It is not easy. Bacteria cannot build up and since I have been doing this frequent massive water changing regimen, I have not had a sick guppy. I can assure you, in the

past, had more than my share of problems.

There are decided advantages to overcrowding. Or at least advantages to having a FULL tank as opposed to just a few fish in a large tank with a substantial expense of water. Of course, here again, these are my ideas on my guppy setups alone. It is stimulating for fish to have company. It actually puts down or the fighting. With so many fish milling around, it is difficult for one fish to pin another fish down and keep in contact with this fish enough to do it harm. There is simply too much diversion going on about them to make this practice, consequently no fish is ever taken advantage of to any extent.

Never have had a feeding problem with such stimulation. I think could feed them nearly anything and they would eat it just to keep their neighbor from getting so much of it. Shyness seems to be lost among the more timid fish. All their brothers

swimming beside them serenely proves that all is just fine so they join in immediately. That is as soon as they get over the initial shock of being dumped into this mess of activity. A new guppy adds its lever of any consequence in the overcrowded tank who notices? The new fish settle down very quickly.

I have approximately one hundred twenty fry in a ten gallon tank. As they grow, add aeration, change their water even more frequently and feed them frequently and heavily. They are growing fine, have not lost one guppy and they are active and happy. So all in all,

I have yet to see the disadvantages of my overcrowding my guppies. Have not one word of guilt as I look at my beautiful, happy, robust fish. I do not feel I am subjecting them to any torture in any way. If this method of overcrowding affects them adversely, my eyes have not been able to see it.

CLASSIFIED ADVERTISEMENT SECTION

Attempting to buy sell or trade fishroom related equipment or supplies? An exciting new monthly feature of *Guppy Roundtable* making its inaugural appearance in the September 1993 issue. It is a classified advertisement section restricted to subscribers of *Guppy Roundtable*.

A maximum fifty word advertisement per item may be purchased for the reasonable price of \$2.00 per month. This special advertisement rate applies to personal advertisements ONLY.

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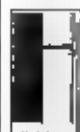
Davidene Taylor
Newsletters Editor/Publisher
Pan Pacific Guppy Association
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Los Angeles, California 90034

re all such as a file card. Another suggestion would be to photograph the gray scale on a black and white card at the beginning of each roll of print film. Gray cards are normally stocked at most photo supply stores and are inexpensive. Do not use one of the "professional" color print films for photographing fish. These films are designed to render natural looking skin tones and will distort the colors of the fish and their surroundings.

TAKING THE PICTURE

When taking pictures of fish there are a few things you should always remember. For those with removable electronic flash you should always keep your lens parallel to the tank glass but your flash should be slightly above the plane of your lens and at a forty-five degree angle to the tank. This prevents "hot spots" glare from the flash reflecting back into the lens. If your camera has the flash built into it, keep the entire camera

BEFUDDLED, CONFUSED AND MYSTIFIED?



have a problem or question regarding the challenging hobby of breeding show quality guppies? An exciting new monthly feature of *Guppy Roundtable*, the recently designated official monthly publication of the International Fancy Guppy Association, is a column entitled *Some of This, Some of That* wherein subscribers' questions will be answered by two of the country's most respected breeders of guppies, PAUL GORSKI and STAN SHUBEL.

Please forward your questions to:

Davidene Tait
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at a forty-five degree angle to the tank and pointed slightly down. No matter the camera, you should always avoid shooting up at a subject in the water. The flash will reflect back from the surface of the water into the lens. It will help to remember that light does not travel

two stops by adjusting the exposure compensation disk on the camera. If your camera is so equipped, or by increasing power or changing the flash's angle of coverage to "telephoto".

WHAT ABOUT AUTOMATIC FLASH/EXPOSURE?

Dedicated electronic flashes that have TTL (Through The Lens) settings will provide proper exposure in this mode with matching TTL cameras using automatic shutter speeds but other types of automatic flash will not. Use these others in manual mode only and follow the camera manufacturer's recommended shutter speed setting for flash synchronization. The use of a second flash on the opposite side of your lens and, again, slightly above the lens plane and at a forty-five degree angle to the glass, will provide a more "rounded" picture, since the second flash will fill in some of the shadow areas and make the fish stand out more from its background. This second electronic flash may be of the same or lower output than the first but the two flashes must be synched to each other and to the camera's shutter. There are many slave triggers available in photo shops. Experiment with using the second flash at equal power settings to the

as far as possible in air. That is why I did not recommend a film speed lower than ISO 100. Even in a brightly lit display you should confine your photography to subjects no more than two to three feet behind the glass. If you must shoot a subject farther away, be sure to compensate for the light fall off by opening the lens one to



experience in photographing fish in tanks ranging in size from several hundred to many thousands of liters. All of the previous suggestions on general fish photography are particularly applicable to photographing fish in a public aquarium. It is important to remember that light falls off rapidly in a deep tank so only fishes close to the front of the tank should be photographed unless you have brought a particularly powerful flash or one whose light can be focused on more distant subjects. Remember too that dark or dimly lit tanks absorb

more light than brightly lit ones which have more reflective surfaces within them. Open your lens one or two stops more than usual when photographing dimly lit exhibits. Finally, beware of reflective surfaces within the tank which could "bounce" your light back into the lens. Such surfaces may include light colored sunken boats, light rocks or coral, etc.

FISH PHOTOGRAPHY AT HOME

If you have tanks set up at home, follow the suggestions for photographing public exhibits and you should have no problems recording your fish and setup on film. You may however want to

devote a particular tank to fish photography transferring fish from your setups to your photo tank and then back again. If so, be sure you use no smaller than a twenty high tank for most average size (three-to-six inches) fish. If you are photographing small active fishes like guppies or tetras a ten gallon tank is good. Bettas and other small anabantoids that do not move much may be photographed in two and a half gallon tanks or other small containers. A fish photography tank should have a medium of light and dark colored gravel on the bottom. Most fish "bleach out" over light substrate and "color up" over a dark substrate. The reason for using the mix is that the lighter gravel reflects light onto the underside of the fish while the dark gravel keeps the fish in color. The photography tank should be kept filled with heated filtered water when not in use. A glass divider one quarter inch shorter than the tank width and an inch higher than the tank should be used to confine the fish to the front half of the aquarium for the sharpest images. Tungsten lamps may be used to focus on your subjects but avoid letting the bulbs heat the tank. A tungsten bulb too close to the water surface could overheat the water to lethal temperatures very quickly. Wear dark clothing to cut down on reflections when photographing fish wherever you are working at home or at a show or aquarium.

(continued on page twelve)

SPECIAL APPROACHES FOR SPECIAL SITUATIONS

Every now and again we need to photograph fish while they are on exhibit. We need replacement graphics, a slide to illustrate a lecture or we are visiting a public aquarium and simply want to take some pictures. Many articles have been written about photographing fishes in tanks set up for that purpose but I do not recall seeing one that tells how to successfully photograph fishes while they are on display. The following tips are the result of many years of



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Use black "electrician's tape" to mask reflective surfaces on your equipment. Do not use "Mystic" or similar smooth finish plastic tapes as they will reflect light even if the tape is black. Most of the guppies given here for home and public aquarium work just as well at shows, but there are exceptions. Sometimes you will discover that it is impossible to position one or two special guppies at a forty-five degree angle to the front of an aquarium or bowl at a fish show. In that case place one light directly over the tank snoutling the light straight down from the top of the fish. Be sure your lens is parallel to the front of the glass while you are doing this. Stop the lens opening down until 5 or 1 full stop when photographing home tanks or brightly lit rooms. This is a good idea to bring along a black yardstick or black velvet to use as a background behind the tank and a friend to hold it in place for you.

FINGERPRINTS, SCRATCHES, ETC.

Many an otherwise fine fish portrait has been ruined by smudges, finger prints or scratches on the aquarium glass. The well-prepared fish photographer will have a small portfolio of window cleaner and a few paper towels in the pocket bag or clean off fingerprints before taking pictures. Unfortunately scratches are a more difficult problem. One way of dealing with these is to rub the scratched areas with a small amount of petroleum jelly or mineral oil. Be careful to clean the glass area around the scratches to remove all traces of the oil. This

tends to render scratches on glass almost invisible when viewed against water. Do not know if this technique will work on scratched acrylic. Another technique is to use a polarizing filter to fade the scratches from the picture. This requires a bit of practice and the use of a moderately fast film as

Once you have the techniques down, your fish photographs will get better and better

these filters do reduce the amount of light reaching the film plane. Polarizing filters are useful for showing iridescence and highlights on fish which are normally rendered flat by conventional photography. Again, experiment with these filters and various lens openings until you can consistently predict the results you will get.

THE KEY TO SUCCESS

Obviously I can not give you a complete course in fish photography in one article or lecture. I have pointed the way. Now it is up to you. The way for you to be successful is to practice. Take lots of fish photos under varying conditions and at different locations, and take lots of notes. When your pictures come back from the film processor compare them to the notes you took. You will quickly see where a picture would have been improved by using more or less light, a different film, or where you did not get close enough to the tank and got an excellent picture of the fish and you camera's reflection in the glass. After a few rolls of film you will begin to see patterns emerging and you can take whatever corrective action is needed. Once you have the techniques down your fish photographs will get better and better.

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SOME OF THIS, SOME OF THAT

Question: I have two questions. First, I have approximately thirty guppy fry and I have them split up into a number of three gallon tanks. I want to put them in a bigger tank. What size tank should I put them in, and how long will it take them to grow to adult size? What kind of filter should I use? I am concerned that they will be pulled into the filter. Second, should I use catfish or other kinds of fish as scavengers in the tank?

- Ryan Nieman

Answer: You do not indicate what your eventual goals are for the fish. If you just want to grow them so that you can look at them, a twenty gallon tank makes a nice setup. Will help thirty guppies and is easy to maintain. If you want to grow them quickly to sell, use a larger tank, such as a bio twenty gallon tank with a sponge filter. Feed heavily, change water frequently and they will reach a salable size in about three months.

If you want to use these fish as a start for breeding stock, set up three ten to fifteen gallon tanks, one for the baby fish, one to nurseries in as soon as you suspect they are males and the third for those fish that you are sure are females. This keeps your stock "pure" and you will know exactly which fish are used in your breeding program. You can put a few small Corydoras catfish in the tank to help remove the uneaten food from the bottom of the tank, but you must remember that Corydoras are not scavengers and must be cared for and fed like any other aquarium species.

Question: Why do guppies from championship stock cost ten times, or more, as a common guppy?

- Jeanine Litschi

Answer: Common guppies can be pool raised at very low cost. Championship guppies can not be raised in pools, but are raised in tanks which is much more expensive. Add to this the cost of food for the raising of virgin females, selection of male breeders, and sorting to separate the culls from the good stock. The culls are either discarded or sold at a much lower price. Other costs for the seller are the expense of advertising and showing. In my opinion, a hobbyist wants to raise excellent guppies, he can not

spend money in any better way than to buy the best stock.

Even fifty dollars a tank is cheap compared with the cost of trying to develop your own strain starting with poor quality stock. Excellent guppy strains do not happen overnight but are the result of years of hard work. Also an excellent guppy strain must be maintained constantly and not all hobbyists are able to do this. Many act as some do not have the experience or the eye to enable them to choose the right breeders. A good guppy strain in the wrong hands or in a pool will not be a good strain for long.

Question: Please tell me what to do. I have thirty aquariums for breeding three lines of guppies - twenty ten-gallon tanks and ten twenty-gallon tanks. My problem is the excessive amount of water evaporation. Within two or three days my water level drops by inches. Is there any way to prevent such a rapid water loss?

- Ty Kotz

Answer: Evaporation is a natural phenomenon that occurs when water is heated or moved at a high speed. Decreasing the amount of evaporation is simply a matter of reducing the temperature or slowing the water motion. There is also another reliable method for reducing evaporation - do not let moisture out of the aquarium. That is keep a close-fitting lid on the tanks.

The amount of evaporation that you indicate is occurring in your tanks is excessive. I would guess that you are keeping the water too warm, are using heavy aeration or filtration and/or do not have covers

on your aquariums or have poorly fitting covers at best. Here are a few modest guidelines and helpful hints that might help cut down the rate of evaporation in your aquariums.

The normal cause of evaporation in the aquarium of a beginning hobbyist is a water temperature that is too high. There is seldom a reason for maintaining the temperature in the tank above seventy-six degrees Fahrenheit. Besides increased evaporation, excessively warm temperatures speed up the metabolism of the fish, shortening their life span, and making it significantly more difficult for you to maintain a clean and healthy aquarium.

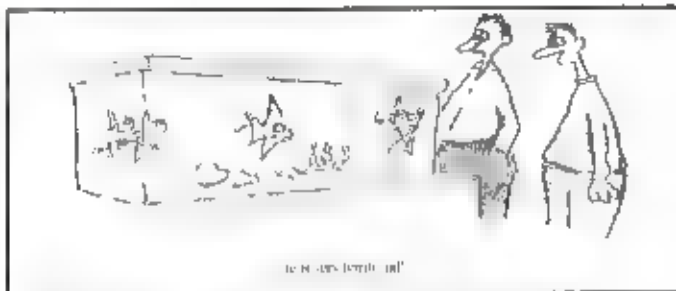
Rapid water motion caused by excessively strong filtration is the second major cause of a high evaporation rate. In general a filter rate of four to five times the capacity of the aquarium per hour is sufficient for the filter to work effectively. A greater water

(continued on page fourteen)

Excellent guppy strains do not happen overnight but are the result of years of hard work

turnover decreases the efficiency of the filter and contributes to a higher rate of evaporation.

However, both of these situations can be controlled by a close fitting aqua lumb cover. The cover allows the evaporated water to condense and drip back into the aquarium. If the water cannot escape, you will have no problem with evaporation. If the cover is loose, broken or otherwise inadequate, water will escape into the atmosphere and thus be lost from the aquarium. Temporary corrections can be made by using household "plastic wrap" to enhance the cover. Do not rely on the "plastic wrap" forever as it will lose its ability to cling to the tank after a couple of weeks. Purchase a good replacement cover for your aquarium and use it. This one item will go a long way toward solving all of your evaporation problems.



Question: What, if anything, can a breeder do about sterility in albino guppies?

- Lee Fianders

Answer: Unfortunately sterility in albinos is not uncommon. There are two things the breeder can try. One, the aquarist can introduce the albinos to a gray-bodied strain and then breed albino males through these gray-bodied hybrids. When an albino is mated to an albino-gray hybrid, half of each litter will be albino.

The other procedure the hobbyist can try is using a female hormone on females of a strain that is going sterile something like using a fertility pill. I have had very good results using the hormone estragen.

As soon as the females are sexable approximately two to three weeks of age separate them into a five or ten gallon tank and begin treatment immediately. I recommend a dosage of one tenth cc of estragen

per measured gallon of tank water. Add once every seven days for a series of four treatments. After the fourth treatment leave the fish in their treated tank water for seven days then remove them to an untreated tank or change fifty percent of the water.

Breed the treated females as soon as possible. Normally you should get fry within thirty days after the above treatment can vouch for this method when treatment is started on females that are only two or three weeks old. I have not tried this regimen on older females, however several breeders whom I have consulted have reported they have found that it will work on older females also.

Question: Is it safe to color test an impregnated female guppy?

- Lisa Brownell

Answer: An impregnated female guppy can be safely color tested, however she will lose the litter of fry she is carrying. Also just as in an older female she may take longer exposure to the testing agent to display her colors. I have tested impregnated females many times and have had no problem with sterility. Exposing impregnated females to similar test conditions has been tried—an attempt to rid her of contaminating sperm but the results have proven to be unreliable.

This month's questions were answered by our "Platinum Expert" Pat Forsyth and Stan Shubel will assume editorial responsibilities for some of this. Some of their interesting work in the September 1993 issue of Guppy Roundtable.

MESSAGE FROM THE PRESIDENT

By Jim Anderson, D.V.M., President
International Fancy Guppy Association
Pan Pacific Guppy Association

In the International Fancy Guppy Association is undergoing a great deal of reorganization at this time. There are many people working hard behind the scenes to dramatically enlarge and improve the organization. The correspondence and telephonic communication requires a time commitment. Without making it a full time job it is impossible for a small group of people to promote the association as

publication under the heading of the Clearing House/Swap Shop. If you have spare fish for sale or trade please drop Steve a note.

It is no time to begin testing. You should be setting up breeders this month. Fry born in September and October will be the fish you will be showing next spring. Will usually set up two females with one male and leave them together for three weeks. Then put in two new females with the male and take one drop from each of the four females usually throw the females out after one drop. It is better to breed several females.

This increases the probability that you are going to breed a female that possesses superior genetics. If you use two males from each line you will have eight tanks of fish for the next show season.

Many people are working hard behind the scenes to enlarge and improve the organization

needed. I would like every club to pick an area of the International Fancy Guppy Association that needs improvement and come up with a workable plan to make that improvement. It does not have to be an earth-shaking idea, just something that would make things run more smoothly.

Inquiries about the International Fancy Guppy Association are increasing every month. I try to call as many new members as time permits, but can not call everyone. I am also about twenty letters behind in correspondence regarding the International Fancy Guppy Association mostly inquiries about obtaining fish. If you are looking for top quality international Fancy Guppy Association guppies contact Steve Kwartel. His name and address appears in this

This is an excellent time for new members to acquire breeding stock. If you set them up now, then you will have show fish for next season.

In this year's annual show hosted by Guppy Associates International in Chicago the weekend of November 5-7, 1993 promises to be a great experience. Most airlines have drastically reduced their rates so now is the time to make your plans and reservations. Everyone brings their best fish and fish stories to the annual. It is always amazing to hear how many "Best of Show" kind of fish die or get finrot the week before the judging competition. It is also amazing how many fish grow posthumously. Bring your best fish and leave the could-have-beens at home.

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544 North Dixie Street
Bridgewater, New Jersey 08807

FAREWELL TO A FRIEND

By Larry McCrady
Gateway Guppy Association

On Thursday July 24, 1993 the International Fancy Guppy Association lost a close and dear friend. Julie Magnifico died from injuries sustained in an automobile accident.

To Jamey Magnifico and their daughters Courtney and Jocelyn we send our deepest sympathy.

For those of us who knew Julie we knew we would get a big hug at any show she and Jamey attended. She was always full of laughter and joy. Whenever help was needed Julie gladly jumped right in and stayed to the finish. She did not know the word "quit" or "stop" as she would always keep going to get everything done.

Julie did not care for all the politics that seem to get in the way of the IFGA at times, but she dearly loved the people of the International Fancy Guppy Association and looked forward to all the shows, especially the annual.

Julie Magnifico will be greatly missed by all of us.

For those who were unable to attend Julie's funeral, there will be a memorial service August 11, 1993 at 7:30 PM at the Vincent Methodist Church in Nutley, New Jersey.

For additional information, please contact:

Jamey Magnifico
27 Wayne Place
Nutley, New Jersey 07110
201-657-1366.

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COME OUT FROM BEHIND THAT VEIL

By Stephen Kwartler
East Coast Guppy Association
South Jersey Guppy Group



With the start of the new show season the IFGA has instituted new rules covering the veil classes. No longer will points for veils go toward the same class championship annual award as do deltas (instead all veil points will go toward a separate veil combined award). Unlike the deltas which remain in their specific color classes the veils will be judged as group classes. Let me clarify this. In past, for example there were two separate classes for snakeskins. There was a separate class for solid snakes as well as a separate class for variegated. Each class had a tank (two matched males), a delta and a veil category and all points accumulated at each show counted toward that class. All categories combined.

With the new rules all the

snakeskins entered as veils will compete as one class. All points remain separate and do not go to the regular snakeskin classes but are combined into a single veil snakeskin class. This veil snakeskin class will have its own annual championship award. Besides the snakeskin class there will be four other veil classes, each also with its own annual championship award. In my opinion these changes have merit but could have some short term disadvantages. They could reduce the number of entries at the shows out on the other hand this could be the beginning of further development and possible improvement in the overall quality of the veil guppy. If the International Fancy Guppy Association truly wishes to see guppy breeders devoting tank space toward the improvement of the veils and so that in the future the veils would have improved opportunity for equal showing we need to provide further incentives. My proposal is as follows. Keep delta

The proposed bowl show schedule for next year to be voted on at the Annual show voted by the IFGA Association International of Chicago the weekend of November 8 - 7, 1993, is as follows:

SECOND HALF 1993-1994 SHOW SEASON

HEARTLAND GUPPY CLUB

April 30 - May 1, 1994

GATEWAY GUPPY ASSOCIATES

May 21 - 22, 1994

CHICAGO GUPPY ASSOCIATION

June 8 - 10, 1994 at June 25 - 28, 1994

FIRST HALF 1994-1995 SHOW SEASON

EAST COAST GUPPY ASSOCIATION

July 16 - 17, 1994

PAN PACIFIC GUPPY ASSOCIATION

August 6 - 7, 1994

NEW ENGLAND FANCY GUPPY ASSOCIATION

August 27 - 28, 1994

GUPPY ASSOCIATES INTERNATIONAL

October 11 - 12, 1994

GUPPY ASSOCIATES OF MILWAUKEE

November 4 - 6, 1994

classes remain the same and show veils to be shown in the five basic groups and (new) provide for veil tank classes to be established.

This would truly allow the veil breeder some equality and at the same time give some recognition that the IFGA is really concerned in improving the quality of veils. In Europe all guppies are recognized and there are equal classes for all tail shapes and color variations regardless as to how many entries with the quality of the veil guppy driving the expansion, we could, in the future see a return of the full lineup of veil classes in our shows.

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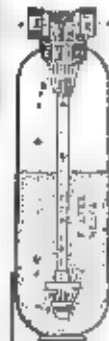
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NOVEMBER 5-7 1993

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SCHEDULE

FRIDAY NOVEMBER 5, 1993

JUDGING: 10:00AM

ENTRY REGISTRATION: 10:00AM - 7:00PM

NOON AL: 1:00PM

8:00PM

SATURDAY NOVEMBER 6, 1993

IN: 10:00AM - 1:00PM

1:00PM - 4:00PM

4:00PM - 7:00PM

7:00PM - 10:00PM

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7:00PM - 10:00PM

10:00PM - 1:00AM

GENERAL RULES

1. Entries must be registered by 10:00 AM on Friday, November 5, 1993.
2. Entries must be judged by 10:00 AM on Saturday, November 6, 1993.
3. Entries must be judged by 10:00 AM on Sunday, November 7, 1993.
4. Entries must be judged by 10:00 AM on Monday, November 8, 1993.

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CLASSES
SEVEN YOUNG
LADIES

YOUNG

Age 0-10

Age 11-15

Age 16-18

Age 19-21

Age 22-24

Age 25-27

Age 28-30

Age 31-33

Age 34-36

Age 37-39

Age 40-42

Age 43-45

Age 46-48

Age 49-51

Age 52-54

Age 55-57

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Age 223-225

Age 226-228

Age 229-231

Age 232-234

Age 235-237

Age 238-240

Age 241-243

Age 244-246

Age 247-249

Age 250-252

Age 253-255

Age 256-258

Age 259-261

Age 262-264

Age 265-267

Age 268-270

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Age 274-276

Age 277-279

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Age 283-285

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Age 304-306

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Age 310-312

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Age 316-318

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Age 343-345

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Age 358-360

Age 361-363

Age 364-366

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Age 370-372

Age 373-375

Age 376-378

Age 379-381

Age 382-384

Age 385-387

Age 388-390

Age 391-393

Age 394-396

Age 397-399

Age 400-402

Age 403-405

Age 406-408

Age 409-411

Age 412-414

Age 415-417

Age 418-420

Age 421-423

Age 424-426

Age 427-429

Age 430-432

Age 433-435

Age 436-438

Age 439-441

Age 442-444

BLUE DELTA (Five Entries)	BLUE TANK (Five Entries)	BLUE VEIL (One Entry)
1. Via Pileo 2. Fred Fraggasso 3. Via Pileo 4. Via Pileo	1. Paul Gordin 2. Brian Chin 3. Paul Gordin 4. Paul Gordin	1. Phoe
BLUE/GREEN BI-COLOR DELTA (Four Entries)	BLUE/GREEN BI-COLOR TANK (Five Entries)	BLUE/GREEN BI-COLOR VEIL (One Entry)
1. Davidene Tall 2. Davidene Tall 3. Davidene Tall 4. Davidene Tall	1. A and R Wagner 2. A and R Wagner 3. A and R Wagner 4. A and R Wagner	1. Moe Sienicki 2. Moe Sienicki 3. Moe Sienicki 4. Moe Sienicki
BRONZE DELTA (Four Entries)	BRONZE TANK (Five Entries)	BRONZE VEIL (One Entry)
1. White Bird Peak 2. Tyne Bird Peak 3. A and R Wagner 4. George Karamyski	1. A and R Wagner 2. A and R Wagner 3. A and R Wagner 4. A and R Wagner	1. A and R Wagner 2. A and R Wagner 3. A and R Wagner 4. A and R Wagner
GOLD DELTA (Four Entries)	GOLD TANK (Five Entries)	GOLD VEIL (One Entry)
1. Bob vanDenLangenberg 2. Bob vanDenLangenberg 3. Bob vanDenLangenberg 4. Bob vanDenLangenberg	1. Bob vanDenLangenberg 2. Bob vanDenLangenberg 3. Bob vanDenLangenberg 4. Bob vanDenLangenberg	1. Bob vanDenLangenberg 2. Bob vanDenLangenberg 3. Bob vanDenLangenberg 4. Bob vanDenLangenberg
GREEN DELTA (Four Entries)	GREEN TANK (Five Entries)	GREEN VEIL (One Entry)
1. Jim Anderson 2. Jim Anderson 3. Jim Anderson 4. Jim Anderson	1. Jim Anderson 2. Jim Anderson 3. Jim Anderson 4. Jim Anderson	1. Jim Anderson 2. Jim Anderson 3. Jim Anderson 4. Jim Anderson
HALF-BLACK AOD DELTA (Four Entries)	HALF-BLACK AOD TANK (Five Entries)	HALF-BLACK AOD VEIL (One Entry)
1. Jim Anderson 2. Jim Anderson 3. Jim Anderson 4. Jim Anderson	1. Jim Anderson 2. Jim Anderson 3. Jim Anderson 4. Jim Anderson	1. Jim Anderson 2. Jim Anderson 3. Jim Anderson 4. Jim Anderson
HALF-BLACK BLUE DELTA (Four Entries)	HALF-BLACK BLUE TANK (Five Entries)	HALF-BLACK BLUE VEIL (One Entry)
1. Margaret Ann Rodriguez 2. Margaret Ann Rodriguez 3. Margaret Ann Rodriguez 4. John Vich	1. Margaret Ann Rodriguez 2. Margaret Ann Rodriguez 3. Margaret Ann Rodriguez 4. John Vich	1. Margaret Ann Rodriguez 2. Margaret Ann Rodriguez 3. Margaret Ann Rodriguez 4. John Vich
HALF-BLACK PASTEL DELTA (Four Entries)	HALF-BLACK PASTEL TANK (Five Entries)	HALF-BLACK PASTEL VEIL (One Entry)
1. Gregory Smith 2. Gregory Smith 3. Gregory Smith 4. Gregory Smith	1. Gregory Smith 2. Gregory Smith 3. Gregory Smith 4. Gregory Smith	1. Gregory Smith 2. Gregory Smith 3. Gregory Smith 4. Gregory Smith
HALF-BLACK RED DELTA (Five Entries)	HALF-BLACK RED TANK (Five Entries)	HALF-BLACK RED VEIL (One Entry)
1. Steve Del Rey 2. Thomas Joffe 3. Mike Ardupe 4. Steve Del Rey	1. Steve Del Rey 2. Thomas Joffe 3. Mike Ardupe 4. Steve Del Rey	1. Steve Del Rey 2. Thomas Joffe 3. Mike Ardupe 4. Steve Del Rey
HALF-BLACK YELLOW DELTA (Five Entries)	HALF-BLACK YELLOW TANK (Five Entries)	HALF-BLACK YELLOW VEIL (One Entry)
1. Gary Mousseau 2. Gary Mousseau 3. Gary Mousseau 4. Gary Mousseau	1. Gary Mousseau 2. Gary Mousseau 3. Gary Mousseau 4. Gary Mousseau	1. Gary Mousseau 2. Gary Mousseau 3. Gary Mousseau 4. Gary Mousseau

SHOW SCHEDULE

FIRST HALF 1993-1994
SHOW SEASON

GUPPY ASSOCIATES OF MILWAUKEE

GIC & DATES

August 1, 1993

RULES DUE DATE

May 7, 1993

SHOW CHAIRPERSON

David Nedzialowski

4388 South 47th Street

Milwaukee, Wisconsin 53220

414-541-9347

COLUMBUS OHIO GUPPY

SPECIALISTS

SHOW DATES

August 28, 29, 30, 1993

RULES DUE DATE

May 20, 1993

SHOW CHAIRPERSON

Garry G. Smith

4 Victory Road

Springfield, Ohio 45504

513-726-6861

GATEWAY GUPPY ASSOCIATES

GIC & DATES

September 1, 1993

RULES DUE DATE

June 1, 1993

SHOW CHAIRPERSON

Linda and Brenda Hale

1 Kathy Court

Fenton, Missouri 63520

314-343-8004

GUPPY ASSOCIATES INTERNATIONAL

OF CHICAGO

GIC & DATES

November 1, 1993

RULES DUE DATE

August 5, 1993

SHOW CHAIRPERSON

Frank Barla

6521 Wilcox Road

Owensboro, Illinois 60518

708-857-9486

708-852-8487

SHOW CHAIRPERSON

Mike Golinowski

515 Johnson Avenue

Moline, Illinois 61401

815-942-8380

ANNUAL

JUDGES: Paul Gordin, Steve Gordin, Bob Kline, Stephen Kozlowski, Tom Kozlowski, Mike Sienicki, Jerry Kozlowski, Frank Gordin.
 ASSISTANT JUDGES: Rudy Mordukhai, Joe Pileo, Ed Reinhold, Peter Schaefer.
 OBSERVERS: Jerry Anderson, Mark Ardupe, Edward Gordin, Steve Joffe, Jim Vich.

MULTI DELTA (Five Entries)	MULTI TANK (Five Entries)	MULTI VEIL (One Entry)
1. Gary Mousseau 2. Gary Mousseau 3. Jim Anderson	1. Gary Mousseau 2. Gary Mousseau 3. Jim Anderson 4. Jim Anderson	1. Tom and Pat Allen 2. Disqualified
PURPLE DELTA (Five Entries)	PURPLE TANK (Five Entries)	PURPLE VEIL (One Entry)
1. Gary Mousseau 2. Gary Mousseau 3. Jim Anderson	1. Gary Mousseau 2. Gary Mousseau 3. Jim Anderson 4. Jim Anderson	1. Tom and Pat Allen 2. Disqualified
RED DELTA (Four Entries)	RED TANK (Four Entries)	RED VEIL (One Entry)
1. Ed Richmond 2. Fred Fraggasso 3. Fred Fraggasso 4. Fred Fraggasso	1. Ed Richmond 2. Fred Fraggasso 3. Fred Fraggasso 4. Fred Fraggasso	1. Ed Richmond 2. Fred Fraggasso 3. Fred Fraggasso 4. Fred Fraggasso
RED BI-COLOR DELTA (Four Entries)	RED BI-COLOR TANK (Four Entries)	RED BI-COLOR VEIL (One Entry)
1. Dan Whitmer 2. Ted Lobello 3. Dan Whitmer 4. Dan Whitmer	1. Dan Whitmer 2. Dan Whitmer 3. Dan Whitmer 4. Dan Whitmer	1. Dan Whitmer 2. Dan Whitmer 3. Dan Whitmer 4. Dan Whitmer
REDSKIN SOLID DELTA (Four Entries)	REDSKIN SOLID TANK (Four Entries)	REDSKIN SOLID VEIL (One Entry)
1. Bob vanDenLangenberg 2. Bob vanDenLangenberg 3. Tyne Bird Peak 4. Tyne Bird Peak	1. Bob vanDenLangenberg 2. Bob vanDenLangenberg 3. Tyne Bird Peak 4. Tyne Bird Peak	1. Bob vanDenLangenberg 2. Bob vanDenLangenberg 3. Tyne Bird Peak 4. Tyne Bird Peak
REDSKIN VARIATED DELTA (Four Entries)	REDSKIN VARIATED TANK (Four Entries)	REDSKIN VARIATED VEIL (One Entry)
1. Bill Klein 2. Bill Klein 3. Bill Klein 4. Bill Klein	1. Bill Klein 2. Bill Klein 3. Bill Klein 4. Bill Klein	1. Bill Klein 2. Bill Klein 3. Bill Klein 4. Bill Klein
REDSKIN DOUBLE (Five Entries)	REDSKIN DOUBLE TANK (Five Entries)	REDSKIN DOUBLE VEIL (One Entry)
1. Steve Wall 2. Steve Wall 3. Steve Wall 4. Steve Wall	1. Steve Wall 2. Steve Wall 3. Steve Wall 4. Steve Wall	1. Steve Wall 2. Steve Wall 3. Steve Wall 4. Steve Wall
REDSKIN SINGLE (Five Entries)	REDSKIN SINGLE TANK (Five Entries)	REDSKIN SINGLE VEIL (One Entry)
1. Steve Wall 2. Steve Wall 3. Steve Wall 4. Steve Wall	1. Steve Wall 2. Steve Wall 3. Steve Wall 4. Steve Wall	1. Steve Wall 2. Steve Wall 3. Steve Wall 4. Steve Wall
YELLOW COMBINED (Five Entries)	YELLOW TANK (Five Entries)	YELLOW VEIL (One Entry)
1. Bob vanDenLangenberg 2. Bob vanDenLangenberg 3. Bob vanDenLangenberg 4. Bob vanDenLangenberg	1. Bob vanDenLangenberg 2. Bob vanDenLangenberg 3. Bob vanDenLangenberg 4. Bob vanDenLangenberg	1. Bob vanDenLangenberg 2. Bob vanDenLangenberg 3. Bob vanDenLangenberg 4. Bob vanDenLangenberg
JUNIOR COMBINED (Five Entries)	JUNIOR TANK (Five Entries)	JUNIOR VEIL (One Entry)
1. Andy Busch 2. Kathy Golinowski 3. Andy Busch 4. Andy Busch	1. Andy Busch 2. Kathy Golinowski 3. Andy Busch 4. Andy Busch	1. Andy Busch 2. Kathy Golinowski 3. Andy Busch 4. Andy Busch
NOVICE COMBINED (Five Entries)	NOVICE TANK (Five Entries)	NOVICE VEIL (One Entry)
1. Jayden at 2. Davidene Tall 3. Davidene Tall 4. Davidene Tall	1. Jayden at 2. Davidene Tall 3. Davidene Tall 4. Davidene Tall	1. Jayden at 2. Davidene Tall 3. Davidene Tall 4. Davidene Tall

CORRECTION FOR
GUPPY
ASSOCIATES
OF MILWAUKEE
BOWL SHOW

Please take note that the HALF-BLACK PURPLE class was inadvertently omitted as a point class in the show information contained in the June 1993 I.F.G.A. Bulletin pertaining to the Guppy Associates of Milwaukee Bowl Show competition for the weekend of August 7-8, 1993.

If you require additional clarification or information it is suggested you contact the Show Chairperson.

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4388 South 47th Street
Milwaukee, Wisconsin
414-541-9347

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GUPPY ROUNDTABLE

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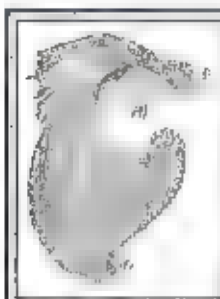
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GUPPY ROUNDTABLE

THE OFFICIAL MONTHLY PUBLICATION OF THE
INTERNATIONAL FANCY GUPPY ASSOCIATION
PUBLISHED BY THE PAN PACIFIC GUPPY ASSOCIATION

SEPTEMBER 1993

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FOR THE YEAR 1992

GUPPY ASSOCIATES OF

MILWAUKEE SHOW RESULTS

PAN PACIFIC GUPPY

ASSOCIATION NEWS SECTION

A MILLION WAYS TO RAISE GREAT GUPPIES

by Jim Anderson, President
International Fancy Guppy Association
Pan Pacific Guppy Association

The fact of the matter is there are as many ways to raise great guppies as there are guppy breeders. I attended shows for many years in an effort to glean as much knowledge from experienced breeders as possibly could. I would read anything I could for just a few ideas I might possibly use in my fishroom. I was convinced the really good stuff was not written down and that there was some sort of guppy secrecy by the top breeders not to let you in on it. After three or four years of showing and only occasionally placing I began to win a few classes. I finally realized that combining my experience and all that I had learned to raise I had developed my own technique for raising show guppies.

Well the learning process still continues. To my surprise there are many things I have to learn twice, or even three times. I always tell new members to the Pan Pacific Guppy Association, "I have made all the mistakes you have made and probably made them twice." You can incorporate as much or as little of what you read and hear into your hobby as you like.

Having said that I think I can safely write about how to raise fish and include some salient tips I have acquired from other breeders. Buy

the best fish you can find. Use a 2 1/2 gallon or five gallon tank for breeders. I find that fish tanks are much larger males with well developed caudal fins will not be able to corner the females. I have seen other breeders use one gallon drum bowls for housing breeders. This is fine with adequate water changes. I use one male with two or three females for breeding. I rarely have fertility problems due to my feeding schedule and continual line breeding and out crossing. If I do need to get fry from a particular line that is having fertility problems I will take a drop from a female raised with twenty or thirty males or set up breeders in a five gallon tank with three males and two females. I usually like to move the gravid females to a five gallon tank to spawn. I will usually raise the fry in the five gallon tank until free to four weeks of age. Occasionally due to lack of space I will put two females bred to the same male in the same five or maybe six gallon tank. I never raise fry together that are born more than three days apart as the older fish will severely inhibit the development of the younger fish. This was something I picked up from Stan Shubel approximately five years ago.

Firmly believe the best way to breed top quality show fish is to breed one male to as many females as you possibly can to increase

GUPPY COLLECTS LIFE INSURANCE

OKLAHOMA CITY (AP) - After Fred Finn Mazanek guiped his last Globe Life & Accident Insurance Company paid off... but not before trying to wiggle off the hook. After all, Fred was just a guppy.

The whole thing started last year when Globe Life offered Sam Mazanek, then a senior at the University of Arizona, a special, one-time only student discount life insurance policy. For just \$1.00, the insured could purchase a \$5,000 life insurance policy good for six months.

Mazanek, twenty-four years of age, figured to be around forty-three months ago. He decided to sign up his guppy, Fred Finn Mazanek. Before sending in the application, Mazanek made sure to answer all the questions accurately.

Age of insured: "Six Months."
Weight: "Thirty Centimeters."
Height: "Three Centimeters."
Good health: "Yes."
In the Military service: "No."
Relationship of beneficiary to insured: "Owner."

Mazanek figured Globe Life would return his check unopened and politely decline to insure his beloved Fred Finn Mazanek. Much to his surprise, instead it issued a life

Insurance Policy Number 3281057.

So when Fred died, Mazanek notified Globe Life. That is when Globe Life took a closer look at the application. A special representative was sent to Tucson to see whether Mazanek was the kind of man who would take advantage of a clerical error.

Yes, said Mazanek.

No jury would award \$5,000 for the death of a guppy, the Globe man argued. Mazanek offered to settle his claim against Globe Life for \$1,000.

Not a penny more than \$850, the Globe man countered. Mazanek said no, but then

he yielded and cheerfully accepted the proffered settlement.

Mazanek said he used part of the settlement to buy two more guppies and a fish dinner for his family.

Globe Life president John Singletary was reached at a fishing lodge where he and other company executives were meeting. "It is sort of funny you have to admit," Singletary said. "You know we mass-produce these policies and have thousands of them in effect."

"He put a strange name on the application for the fish, and our computer is just not trained to catch fish," guess you could say.

A MILLION WAYS TO RAISE GREAT GUPPIES

(Continued from page one)

your chance of duplicating or improving on the best of you line. Breeding two or three males to a group of females will yield a lot of fry but will slow down the rate at which your fish improve and will not allow you to learn as much about the genetics of your particular line. Mike Castella is the only breeder to win Grand Male five times and he is adamant about this principle.

At birth to four weeks of age, retain the eight largest females in the five gallon tank and put twenty or thirty of the biggest males in a fifteen or twenty gallon tank. I put three to four males with one female for two reasons. If something happens to my virgin females, they will still have some males to get fry from. Secondly, if males are raised in a tank completely devoid of female companionship at four to five months of age they will no longer chase females, they will only chase other males.

In next month's issue of Guppy Roundtable, I will go into where most breeders go from here and some of the anecdotal information I have obtained from top guppy breeders over the last ten years.

GUPPY COLORATION

By Dr. Eugene Lott
Excerpt from Guppy Roundtable #678

When you raise half-black pastels or half-black yellows, you notice that the color either changed or got paler. This is especially true in some of the yellows. You will find some of the half-black yellows as strange as it seems, from which the tails (some of them) look almost butter yellow. Then as you raise them yourself in your tank, you know that they become fainter and fainter until finally it is yellow occasionally but it is now a yellowish-white. So the question looks like "Are you missing something in the water?"

This prompted a lot of experimentation you may remember one time I mentioned in a previous article in Guppy Roundtable. African Violet food added to the water seems to help a guppy produce color.

We carried this to further extremes with some beautiful work which was done by a friend of mine at the University of California. Using radioactive phosphorus as a tracer he started a course with some of the vitamin compounds where we could put radioactive tracer in the molecule itself, put the new vitamin in the water, and after several days take the fish out and study them radioactively and see if they had absorbed that vitamin. We were surprised they had not. It immediately prompted the question, "Why didn't they?"

Well, the first assumption here is that ordinary guppies do not drink water even though they live in water, they do not drink it. It is true they get water when they eat

their food, but this is a very small amount of water because they have in their throat a little section that will grab a bit of food and squash the water away from it before they swallow. The reason is obvious. Because of the water balance problem in a guppy, and you know what that is called after you get a guppy that is all puffed up with scales sticking out, he cannot drink that much water simply

the cell wall but the mucous membrane of the guppy itself. This is where we get, and I am sure all of you are aware, all kinds of diseases. If a guppy injures himself, if he scrapes that mucous membrane off then the underlying set of cells are wide open to infection or are wide open to the absorbing of something you want the guppy to absorb.

We then started after this problem of what makes a guppy color. We immediately started adding all kinds of things to the water. Ordinary things

not chemicals, coloring agents, not dyes, not things like paprika, not things like beet juice, not things like animal dyes, but those things that are water soluble, the various molecules that give a guppy color. One of the most interesting to play with is, of course, melanin, and

What, if anything, can a hobbyist feed a washed out half-black guppy that would make his melanin very black

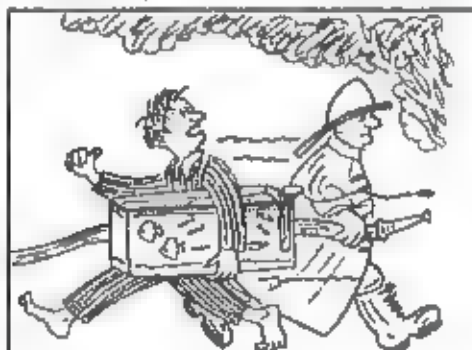
because he cannot urinate, has much water back but. So he does not take it in. This means then any molecule that is too large to diffuse through the cell wall of a guppy cannot enter the guppy unless he swallow it.

We went one step further. If you treat a guppy with a mild solution of phosphoric acid, it will destroy the mucous membrane all over the fish. It is a very difficult and very

one of the very tricky things in the formation of melanin is manganese. This gives us something to play with. What could we feed a washed out half-black guppy that would make his melanin very black so he would then be the dark half-black that we normally see or that we would like to normally see?

Well, we found all kinds of variations and results. In those fish

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Scram up, man, my wife is in there.

But obviously the barriers are not only

GUPPY ROUNDTABLE

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that did not show an increase in the intensity of the black color due to the presence of manganese. We started taking sections to see how thick the mucous membrane layer was and, sure enough, that was the key. Those guppies that have thin mucous layers absorbed these molecules more readily than those that have thick ones. It is undoubtedly a genetic trait, the thickness of the mucous membrane. But it is also a trait that is due to environment.

One of the things that Dr. Hiltz found out very quickly was that a guppy who was raised in water that is changed half every day from tap water doubles the size of his mucous layer because of the chlorine in the water. He doubts if it protects himself. When water is changed half each day with distilled water, totally free of everything, the mucous membrane layer stays the same thickness.

Now this really brought out another interesting point. What happens when we replace water



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in a guppy tank with water directly from the tap? We know you will be getting all kinds of crazy things but among them you are getting chlorine. So this is going to affect the guppy in some way. It is going to, first of all, apparently increase the thickness of this layer and thereby make him more resistant to many, many things. This is probably one of the reasons why many guppies raised this way have very few diseases. But it also plugs up the door through which we want to feed this guppy something. So then we started

thinking, okay if the organic metallic compounds are so big for the guppy to take in through his system, and he is not going to drink enough water to make it worthwhile, let us go to simple metallic compounds whose molecules are small. We got some very good results.

I have a list for those who would like to try it. It is an interesting little series, but here again we found variations. Some varieties

colored nicely, other varieties maybe a similar strain did not. We started to investigate what was the difference. Believe it or not, environment is the change that has to be looked at carefully. In those tanks where plants were growing, where the water is changed a minimum amount, the coloring enhancement is the greatest. Why? Again using radioactive tracers, we found the obvious solution. If we really stop to think about it, I think one of us would come up with it.

In the old-fashioned bait tank aquarium you had plants and snails and fish and the whole bit. Also, in that kind of system, and all of the microorganisms, amoebas, parameciums, rotifers and so forth. Parameciums can take these metallic elements out of the water very fast. If you know how a paramecium works, he is a slipper shaped animal. He has an opening which is like a mouth and he has what is called a vacuole. He simply sucks water into this vacuole and closes it off and if something is alive in there he eats that, but he will also absorb all of the elements that are in that drop of water. So he absorbs them and guess who eats him? The guppy! We deliberately fed the paramecium this mixture in a separate aquarium and fed them to the guppies in distilled water. They colored beautifully. Where we simply raised the guppy brothers in distilled water with ordinary foods, they were much paler than

(continued on page five)

their colorful siblings. So as you can see, we have a real complex cycle going here.

While I would not like to admit that to get the best out of a guppy colorwise we are going to have to have super balanced aquariums with plants and snails and everything else, the old adage of what the guppy is eating between the times you are feeding him, namely the microorganisms that are living in his environment, are extremely important.

This mixture was arrived at literally by hit and miss, because some of these things are poisonous. I am sure you will appreciate the following:

- 2 grams of manganese sulfate
- 2 grams of nickel sulfate
- 4 grams of potassium bitartrate
- 1 gram of copper sulfate

Dissolve in a quart of water, three drops of this liquid is placed in ten gallons every two weeks and no more. If you have plants in the tank and therefore more microorganisms swimming around, three drops in ten gallons every ten days. Now when you change water, let us assume for a moment you do not have plants, keep track of it, and to maintain this kind of balance you will have to know how much you take out. I want to warn you about this. Here is one of these mixtures that some is good and you might think lots is better. NO WAY. Six drops in ten gallons can be fatal and CAN be fatal quickly. Very likely the biggest problem is the potassium bitartrate. It is a very toxic substance, unfortunately. It is a source of potassium and chromium that the guppy can easily use to make all the rest of the colors that he plays with. So as you take,

approximately five gallons out of a tank, do not add half of the dosage back unless you are going to do this cleaning only every two weeks. You are going to have to arrive at a balance and you will have to do it by experimentation. Incidentally, greens colored the fastest. It was amazing how intense they got. This simply is you are now giving the guppy some of those metals that he might not be getting in his food. This is because a lot of our fish foods will list all of these metals but, what form are they in? This is a problem. Sulfates are easy to absorb. They can handle it fine. Potassium bitartrate is very easily absorbed and is deadly poison to a fish. It will make you all antsy-colored if you get it on you, would not suggest you add it to your coffee. Do not know what that will do to you. You know that copper

(continued on page six)

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sulfate is poison to guppies and you will notice that is the least amount of material you are adding.

Unfortunately, if you go to buy these things you end up with enormous bottles of which you will use maybe as much as you can get on the tip of a small knife. So, if you are interested in trying this, I would suggest you pool your resources and not spend a great deal of money for four bottles of stuff you are not going to use in a lifetime. So judge accordingly. But also keep in mind that it is the in-between host those microorganisms that are extremely important to anything that you want to get made of a guppy.

We tried some experiments in which this material was added to the salt water used in raising brine shrimp. The baby brine shrimp are eating things. How much would they absorb? If the baby brine shrimp are raised in a large container that is aerated and they are actively eating baby brine shrimp, you know they live for several days on their little egg sacs. Once that is gone they start eating and they eat microorganisms. Your books will tell you to feed them brewers yeast and this kind of thing. Great? Yes. They will even grow. But, they will also get rid of almost all of the metallic minerals that you need to have inside them.

do not know any easy way around it other than simply adding this to the water and trying to cut down on

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the percent of chlorine in the water that you are adding to your tanks because the chlorine added to the tanks kills the microorganisms. In one way, of course, that is good because this gives you some control over your fishes' health. If you stop and think, if you change water in a guppy's tank quite often with water that has chlorine in it you are killing off microorganisms and you are almost growing that guppy in a

sterile condition. The chlorine that is there is acting as a killer for anything else in the water and of course the guppy itself. If it is strong enough. So, if you want to do this and do this as an experiment, I would suggest you only use aged water or boiled water to get rid of the chlorine.

Your ordinary water has many of these things. For instance, we did not add calcium here because I doubt if there is a drop of water in California that is not full of calcium. We did not add magnesium because again there is probably not a drop of water in California that is not full of magnesium. The same goes for sodium, potassium, as well as other things. We did enhance potassium with potassium bitartrate because potassium bitartrate is a nice molecule for a fish to handle. But exactly how these things are used by a fish is

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way too technical to go into. But I am sure you can imagine if you were making a particular molecule that is animal friendly which is one of the blue colors, he has to have this chlorophyll in that molecule. Well, he can get it there once it is inside the guppy and that is how you have to do it.

I am very curious, most of us people have been talking to about the mineral blocks that came out about a year ago got the same kind of results we were getting when we were adding African violet food. Some people had good results. Some people decided they could all no difference at all. I think, here we have this problem of how thick the mucous membrane is on the guppy. So, remember anything you add to the tank that you want the guppy to pick up, you are going to almost have to get it down his throat somehow because he is well protected from anything coming in through his skin. His mucous membrane blocks at the cell walls of the epithelial layer.

So the easiest way of course is to put him in a tank where there is some algae. Put him

in a tank where there are some microorganisms so that they can gobble up the microorganisms. I am quite sure from the results we got from outdoor tanks that this is exactly what is going on. There are enough microorganisms in the tank outside tanks exposed to all kinds of stuff dirt blowing in droppings from who knows what flying over so they are getting all of these peculiar minerals. Microorganisms are eating them, guppies are eating the microorganisms, so you have a bright colored guppy because he was grown outside.

So, remember those guppies (those) that we have here today are growing at home in sterile conditions as far as minerals are concerned. On the vitamin side of this thing, as mentioned earlier you simply have to rely that the vitamins he needs are in his foods. Most of the vitamins are too unstable when they are mixed into the water. They start to oxidize altering form and the guppy can not use them even if he would happen to swallow a mouthful of it. The microorganisms, of course break the vitamins down. They start breaking it into something they can use. Now the guppy can use those

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fragments if he eats enough of them or course. But in 1950 minerals that we are talking about we are talking about in the guppy molecule itself very very fractional parts per million. I mean we are not talking like he has got to have a thousandth of this, we are talking a millionth of this is what makes the difference. Do not exceed this or you will be in trouble. You can kill them very fast.

hope as we go along, some of you will try different experiments with the water conditions that you have got. For instance, one of the gentlemen in Colorado that was doing some work along this same line. I asked him to try some of these to see if he could get duplicate results under an entirely different set of water conditions. He did. He found that he got the best results, now I am not sure if we are dealing here with a psychological thing or not, but he felt he got the best results if in addition to these, he hung a rusty nail in the aquarium. Well, certainly iron is required in the guppy's diet but here again, water is coming into your aquarium through iron pipes like mad and if you run a spectrogram on your water you have got iron in it whether it is rusty looking or not. But I suspect since he is rather an emotional type he felt he had to have a rusty nail in

(continued on page eight)

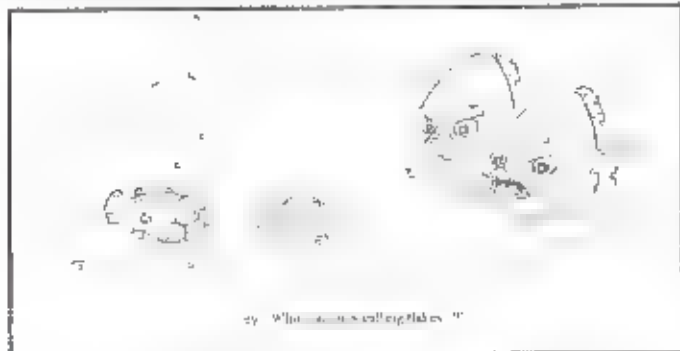
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there to make sure there was some rusty iron in the aquarium. So whether or not that will add to your guppy's color, I do not know. I personally doubt it because I think there is enough iron already there. But when all is said and done I assure you that your black guppies will never look blacker, your blues or greens will never look bluer or greener.

You can go the other route. Take the guppy that has been growing in your tank. That you see all the time. Put him in a 5-gallon jar in which you

change the water every day with aerated distilled water and, if you watch carefully under the

same lighting conditions, as time goes by he will get fainter and fainter and fainter because you are leaching him out just as if you were rinsing out a wash rag. Then after you get him down to where he is so pale and you are not even sure what he was when you started, if you will add a few drops of this, in about ten days he will be right back where he started from. Especially if there are lots of microorganisms in the water. If there are just a few it will take longer. The more of these that there are, the better.

For those of you who might like to raise paramedulums, which incidentally guppies love, it is not a difficult thing to do. You can raise separate tanks and simply give them an eyedropper full of souped-up paramedulums every day. But if you have many tanks, I can not imagine anyone running around with an eyedropper feeding a horde of ravenous guppies. Therefore do not know how many tanks it is practical to feed with souped-up paramedulums, but it is something to consider. Here again, you have one of these same things whereby

all of these colors are genetically contributed. The genes say "I am going to make this fish blue," but if the building blocks to make the blue pigmentations are not there even though the genes say "I am going to make it blue," he cannot possibly make it blue. It is simply that. The genes say "will do it if you give me the building blocks to do it with." If they are not there, he can not build them at all.

It would be extremely interesting to see some of our pastels that were treated with this material to see where

they would go. How many of our pastels the soft beautiful pale colors are due to environmental conditions having a lack

of building blocks to make pigment and how many of them are actually dictated by genetics. It would be interesting, and on that subject we have absolutely no guesses at all. I know on those that we tested which were red, blue, green and half-black, the difference is startling. You always do these kinds of tests by splitting up groups of brothers so that you know who's who, so you are dealing with the same kind of things. The results all the way down the line were very, very fine.

If you want to play this direction, if you wonder whether or not your fish is getting the right vitamins, carefully check your foods. It has got to be in the food or he will not get it. The vitamin molecule is too big unless he swallows it. The minerals, especially these particular ones, have very small molecules and he can get those but he will get them better if he eats them via another animal. Give it a try and, if you have washed out guppies, I think you will be very surprised and absolutely delighted at the results.

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SALTS AND FISHES

By Ray Wetzel
Exotic Aquarium Society

Sea salt is a mix of many salts. It is mainly sodium chloride, mixed with small amounts of magnesium chloride, potassium chloride,

carbonates and similar chemical substances. All living things, animal and vegetable, need and contain salts. Salts are present in fish in their various organs, muscles, tissues and in their blood. Most fish contain about one percent of salts in their blood, one part per hundred. Certain tissues remove salts from the blood, the kidneys, for example. Other organs add salts to the blood. The blood absorbs salts from the stomach and intestines of the fish. Other tissues are in salt equilibrium with the blood stream. That is, salts are constantly being added and removed, but in such quantities that the total amount present in the tissues at any time is fairly constant. The health, in fact the life of the fish depends upon those conditions remaining fairly constant.

Fresh water contains about one one-hundredth the percent of salts. How then, can a fish maintain its normal blood salt content? A large amount of water is absorbed through the fish's gills and with it a great deal of dissolved salts. The fish takes in salts in a greater

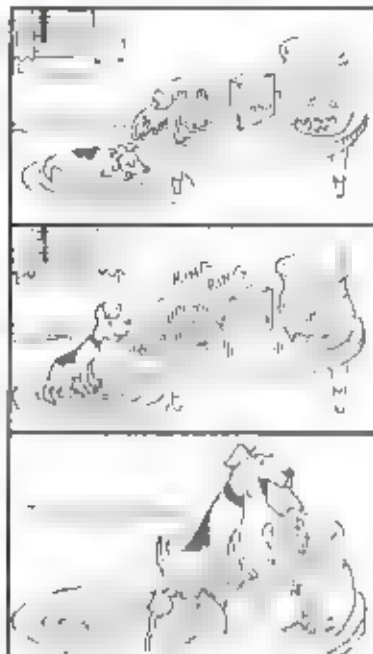
proportion than they are dissolved in the water. There is only one part of salt in ten thousand parts of water, the fish will absorb (by extracting through its gills) one part of salt, but only one thousand parts of water or perhaps only one hundred. To do this it has to use up energy, to use up energy the fish must be healthy.

Fish eat a great deal, their food contains a relatively large amount of salts. These are absorbed into the bloodstream through the stomach. Salts and water are exchanged by the blood with other tissues. From these other tissues, the outer surface of the fish, for example, some salts are given back to the outside water. Some water is also absorbed through the skin. Just as the gills look in water and salts, they also return some to the water, the remaining excess water is given off by the kidneys. In this manner the fish maintains its normal salt content.

However, if the fish is suddenly roughly handled or subjected to rapid temperature or pH changes, the fish goes into "shock." When this happens, the water content of the fish remains about the same, but there is a sharp decrease of salts. Before the gills take in large amounts of salts, now salts are

rapidly lost through them. The fish does not eat. Either it can not or it will not. No salts are added to the blood from the stomach, and the salt concentration of the blood drops below its normal level. Since the blood salts are in equilibrium with the salts in various tissues, these salts too are lost. If the fish persists in this first stage of shock enough salts will be lost so that the animal will die. A fish can lose just so much salts. When the salt content drops below a definite level, death occurs. This level varies with the species.

If the fish is healthy and able to recuperate and if the environment permits, the second stage of shock follows fairly rapidly after the first. There is a terrific uptake of salts from water through the gills. The salt level in the blood and tissues rises to its normal value. An enormous amount of energy is needed for this purpose, and only a fish in good condition can supply it. A fish in poor health or



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FROM FRY TO SHOW GUPPIES

By Peter Huhner
Excerpt from Guppy Gazette 1989

If you have given your guppies from the time of birth will determine to a great extent the kind of guppies they will be at maturity.

will list some of my rules and hope they will help you:

1. When a female looks ready to have young, I carefully separate her in a bare, filtered five or ten gallon tank by herself. My males are not put there young when they are born. After delivery the male may be returned to the breeding tank.

2. Never keep more than one litter in a tank. There are two reasons for this. The first one is that the fish do not seem to grow and develop properly when the litter is more than one. The second reason is that it is important to know definitely which are brothers and sisters.

3. A ten gallon tank should be the maximum for baby guppies.

4. Water temperature or fish up to three months should be kept to eighty-six degrees Fahrenheit. I have been very experienced that these temperatures create rapid growth and healthy bodies which is vital to the early development of good guppies. Do not believe it is practical at all on the life of my guppies.

5. Feed them a minimum of six times a day. The first feeding is a ten dry food, powdered egg. This must be fed very sparingly because it will cloud a tank. After this very fine dry food is fed about four times a day and brine shrimp once a day.

Much has been written about food for your guppies such as beef heart, daphnia, mosquito larvae

and worms (blood, micro red and white) and believe if your guppies are healthy and vigorous they will get as much benefit from good dry food and brine shrimp and will enjoy every particle of it.

6. Sex the guppies at one week or one month.

7. Two fish per gallon grow well up to three months of age.

8. They must have a steady body by the time they are six to eight weeks of age and are well pleased, proportioned. This is the time you will make the decision as to whether the litter is good or if you should not keep it. It is a terrible decision, but you will learn with you. Some of guppies will help you determine this.

There is a general belief that guppies that do not show themselves early will be the largest and most guppies at the time, however, have seen guppies that develop color early and as large as eight months of age.

A novice can learn from an experienced breeder. He should never hesitate to try his own ideas, but only if he thinks originally and young will own ideas are you coming up with something new and worthwhile.

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SALTS AND FISHES

(continued from page nine)

living in crowded, foul water cannot absorb enough salts and cannot go into second stage shock. It remains in the first stage and dies. We cannot do anything about it and salt tolerance of fish, but poor health is always the result of poor care by the aquarist.

Now you can see why it pays to have a fair amount of salt in our aquarium water. About a level teaspoon in two and a half gallons. This makes it easier for the fish to progress through second stage shock without the needed salts. The fish does not need expensive salt energy to take in the salts.

Another type of shock is wound shock which is the sufferer when his fins are torn or scales knocked off. A new avenue for salt exchange has been drained, but it is a way to help. Salts are not absorbed through the skin. They are lost in large quantities. The amount of a wounded fish is to place it in water in which is added a good quantity of salt. In addition to the salt action against injury you are supplying the body needed salts to the fish minimizing the loss of salts from blood and tissue and giving the fish the best chance of recovery.

ALBINISM

By Harry Marston
Excerpt from Guppy News 1988



Although albinos are shown in the albino class at almost all bowl show competitions conducted by International Fancy Guppy Association sanctioned organizations, very little is known about them or achieved with them. I have never heard of them ever taking a place in First, Second, Third or Fourth Best of Show. Why? Usually they are the sports that someone encounters in his guppy strain, and if he happens to have two that look similar, he will show them.

Yet, if one would just take time to develop this particular guppy, he would believe that before long he would have one of the prettiest guppies ever seen.

Albinos are supposed to be lacking in all color pigments, but in the guppy, it is possible to retain a great deal of pigmentation and still keep the pink or red eyes.

Albinos are supposed to be lacking in all color pigments, but in the guppy, it is possible to retain a great deal of pigmentation and still keep the pink or red eyes. However, you cannot retain darker coloring, such as black or dark brown, in the tails. It is very possible, however, to get a purer green, blue, red or yellow. These say are purer because they do not have the black, dark purples and blues splashed throughout the normal parents, which are gray-bodied guppies. This dark color is often cleared up, or lightened, so that you will get a purer color in gray guppies by crossing them with a gold. Therefore, you can achieve a more brilliant gold strain because much of the darker pigmentation will be bred out.

Yet when it comes to the albino, a lot of other considerations have to be taken into account. A pair

of albinos are very rarely fertile. One pair out of twenty-five might possibly be fertile. Also, if you are at all successful in breeding a pair, the results are usually very disappointing because they are weak and lack any vigor, even with the best of care. But say you were to breed an albino female to a red-tailed gray male. You chances of getting an albino would be quite remote unless the male also had albino stock in him. Almost all the

Albinos are supposed to be lacking in all color pigments, but in the guppy, it is possible to retain a great deal of pigmentation and still keep the pink or red eyes.

young would look like the father. It would mean to receive all the characteristics, but now two are offspring, even though they are gray-bodied and you will receive approximately twenty-five percent albinos.

Accidentally you use pups when breeding albinos as the parents. The parents will develop every albino fry. Probably the lighter fry are more easily seen and look like they might taste better. You will notice that these albinos have just as much vigor as their gray brothers. Also, it seems as though the

from this spawning have an ability to grow much larger than the original grays that you used. This might be a result of the cross breeding.

Now you can take the gray from this spawn and recross with your albinos, and your percentage of albinos will go up. You will also have vigorous albinos and better gray than you originally started with. If you want more red in the albino, be sure to use fish only from red stock, particularly like red because it is possible with the lack of black

pigments, to get the red through the entire body. But suppose should also state, do not quite get the tail that would get on a gray, but perhaps by more selective breeding can manage to put a Delta tail on an albino. This would

be worth working for, as believe would have to be in the running for First Best of Show.

Believe the above to meet the rules for genetics as asked by Danvir Mendez, but sincerely believe this to be easier understood by the average hobbyist than possible.

ARE YOU BEFUDDLED, CONFUSED AND MYSTIFIED?



If you have a problem or question regarding any aspect of aquarium maintenance or fancy guppies? An exciting monthly feature of Guppy Roundtable is a column entitled *Some of This, Some of That* wherein subscribers' questions are answered by the current and former judging Board Chairpersons of the International Fancy Guppy Association, PAUL GORSK and STAN SHUBEL. Do not miss this opportunity to learn the secrets of two of this country's most respected and successful breeders. Please forward your questions for consideration to:

Davidene Tar
Newsletter Editor/Publisher
San Pacific Guppy Association
38 S. Monticue Avenue, Unit 8
Los Angeles, California 90034-5643

SOME OF THIS, SOME OF THAT

By Paul Gorski and Stan Shubel
International Fancy Guppy Association

Question, I understand that many of this country's top breeders have fish room setups often encompassing one hundred plus tanks and that they perform at least bi-weekly twenty percent water changes. This seems to be an almost impossible task for someone holding down a full time job. How do the top breeders accomplish the twice weekly water changes?

- Kevin Muir

PAUL GORSKI: Whether you perform bi-weekly water changes of twenty percent or weekly changes of forty percent plus, the time commitment is approximately the same. Equipped with hoses and a Teal Marine pump I can perform a forty percent water change and fill up my one hundred tanks in three hours. That is only one evening a week and with a small television in the fishroom Monday Night Football gives me the perfect opportunity. Guppy breeders consider this a serious hobby and realize that time and effort must be given their fish. Raising show guppies is not a hit or miss after thought activity. Time and elbow grease will often beat the best planned, poorly executed program. Remember, we are but keepers of water vessels that guppies just happen to live in.

Question, I understand that six to eight tanks are required to breed and improve one strain of guppy. I would like to know how these tanks are used (e.g. how many tanks are used for raising fry, how many for breeding, etc.)?

- Nick Visser

STAN SHUBEL: I would place the breeders in a 5 or 5 1/2 gallon tank. Another tank or two of the same size would be used to keep the fry in for one month (the advantage of

the smaller tank is that it concentrates the live shrimp making it easier for the babies to feed on).

At approximately one month you should separate the males and females into ten or fifteen gallon tanks. At about 2 1/2 to 3 months of age you can begin culling usually keeping only the best looking males and enough good females for breeding purposes. The remaining tanks would be used to complete the growing cycle. For ease of care and to gain optimum growth potential, I would not recommend more than 1 to 1 1/2 fish per gallon.

Question, Some breeders recommend line breeding, others recommend inbreeding, while others recommend a small harem of your best guppies. Which breeding method is best?

- Kevin Muir

PAUL GORSKI: No one method is best for every set of conditions ideally the best male with the two best females would give you the best young. Some strains will not allow you to sex the fry early and then setup your breeders. The "harem method" three males to five females has worked in the past for me. The line breeding/inbreeding question is a completely different problem that faces the breeder each day.

If a breeder wants to setup his own line or strain he needs to employ both methods as well as an outcross to begin the project. A very

simplistic model would be to outcross two different strains to get the F-1. Taking the F-1 males back to a female from one of the parent strains will produce F-2 babies (line breeding, back cross).

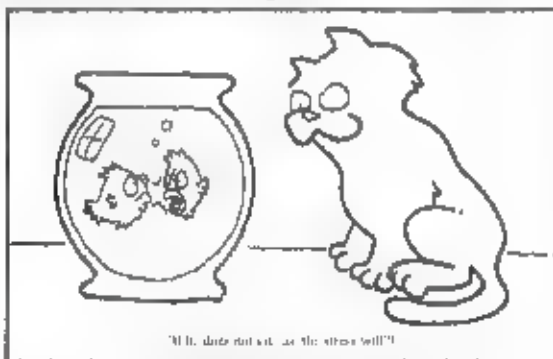
The F-2 young can now be sibbed (brother-sister), beginning the inbreeding process. Anywhere along the inbreeding process you can go back to a parent strain or a related F-1 or F-2 for other line crosses. Knowing when to do this makes guppy breeding an art rather than a science.

Question, What is the minimum number of different foods I should use and still breed and raise superior guppies?

- Tammy Litty

STAN SHUBEL: The most important in live baby brine shrimp fed in sufficient quantities. Originally I had thought it was necessary to feed other live foods but have found it is not required. One live food I would definitely stay away from is black worms. As to other food, several different types of the best quality dry foods is all you really need, along with the live baby brine shrimp.

Other supplemental food choices would be frozen adult brine shrimp, beef heart or a Gordon Formula type paste food. Unfortunately the only problem with the latter two is the additional bacteria and/or clean up problems you could have in using them.



WHAT'S SHOWING THE FISH FEST IN MILWAUKEE!

By Jerry McCrory
Gateway Guppy Associates

Ihis will be an attempt to review and summarize what is going on fish-wise at the shows. This column is to help those who can not attend a show but are interested in the competition, quality and quantity of the show bench.

The Milwaukee show has always been one of my favorite stops on the circuit. The theme of their shows is "PARTY". Everyone can expect to receive a hearty welcome and feel like your a member of their club.

This year the entries are down again as several breeders are still having disease problems or water problems. However, this show had over five hundred entries. Judging went well with only a few discrepancies which will discuss later. The following is one persons views of what was on the bench, what wasn't, what needs to be improved. Above all, it should be noted that all entries are always appreciated and gladly taken. The exhibitors can take pride in that they shipped or took entries to a show. Those of us that did not need to get busy and raise our little friends.

I put the show bench in three categories: strong class, weak class and good showing class at the strong class. One of the best classes shown had to be the Novice Female. I was one of the judges that reviewed this class and can tell you it was not easy due to the many good fish. The red class has once again become the show stopper good deep red color, strong bodied big fish. The Half-Black Blues are getting back to good color and big strong fish with good competition. Those showing the Snakeskin variegated have been going through a lot of culling as it now shows on the bench. These fish have good pattern in both body and caudal. Good work breeders. Half-Black AOC as usual are of good size with

strong color. A continued culling program for matching dorsal to caudal in color is the challenge that those showing always have had. A hard class to start in with, strong competition. The Half-Black Pastels are always big, strong bodied and caudated fish. This class has been dominated for a few years now. Other strong classes included Purples - young, heavy competition. Black Female was one of the best groups of these fish in years but caudals need to be larger may have been young females.

The weak classes (this could mean small quantity of entries or color or small fish) The Blues were young with little competition. The Green class had very little competition. They would have been tough to beat though but had good color throughout the entire body. The Half-Black red class needs more competition. This is a good class for a novice to get some quality stock and start to show in. The Bronze class is a hard class, but a novice should give it a try. The biggest surprise was the Female classes. Half-Black Red Junior and Blue/Green were young fish. A good six month old fish would have won all three classes hands down.

The good showing class (large quantity of entries, good proportionate fish). To start, the AOC Female class had a wide variety of good sized females. The Albino were young but many breeders need to strive for a better dorsal. Novices are missing some easy points by not competing in the Novice Tank class. Remember that a tank is twice the points toward the champions trophy. Also remember that no two males are completely identical. Do not be scared by the "Match Male" class. Watching a tank class being judged will also help you pick your entries. Breeder Male and Breeder Female looked good. The Best of Show Tank was one of the strongest in a long time. All four finalists were excellent fish

with not much separating all four. It should also be noted the second place red would have placed in the top four. This is done in dog shows. If first in a color then second is brought to the bench to see if it is competitive. Something to think about.

A BIG congratulations to novices Tom Steggall and Tom Weidenhofer. Tom Steggall won Novice Female Blue/Green Female third and fourth Breeder Female. Tom Weidenhofer won first in Breeder Female. These guys raised some good fish but did not know it for sure until they entered. I am sure I will see their names alot in the future. In the Blue/Green Bi-Color class a first time congratulations goes to Mike and Kathy Slater. Well done! I know they are hooked now (sorry gups, didn't say hooked did I).

This article is a little lengthy but feel it is needed to explain what is and isn't on the bench. This is not to criticize anyone or any class of fish. This is to help those who can not make a show or to get someone interested in a class that could use some competition. If someone wants additional or more specific information let me know and I will try to improve my reporting of the classes. I would like to see more classes with a quantity of fifteen to twenty entries each with good proportionate fish. Remember young fish will hopefully make two, three or four shows so do not stop showing them. The three gentlemen mentioned above were at the Milwaukee Show and followed the judging groups around. After a little prodding on my part, got them to ask questions after the class was judged. They asked good questions and were understanding of the ways we judge.

Thanks to all who showed and who showed up in Milwaukee. It was good to see all of you. Thank you to the Milwaukee Club for the fishroom tours and another great show. Your hospitality is second to none.

Special Note: A moment of silence was observed at the hospitality room in memory of Julie Magnifico. Julie you are missed by us all.

TWENTY-FIFTH ANNIVERSARY CELEBRATION

To IFGA Member past and present

The following is a letter sent to as many IFGA alumni that I was able to get addresses for if you know any past members that are not receiving the bulletin, please let them read the letter and encourage them to attend the reunion in Chicago.

Thank
Pat Allen

*We have seen enormous improvement
in the quality of the guppy during
the past twenty-five years*

Mark the
information on
your calendar

Dear IFGA Alumni:

Well, we finally did it! Yep, who would have thought that a small upstart organization like the IFGA could have lasted twenty-five years. During that quarter century we have had "fat" years and "lean" years; we have had "good" shows and "bad" shows; we have had "big" trophies and "small" trophies and we have had "wet" hospitality rooms and "dry" hospitality rooms. Everything else aside, two things are for certain: 1. Over those twenty-five years, we have seen enormous improvement in the quality of the guppy; and 2. We have had many good and wonderful friends participate in our organization.

We have moved into our second quarter century and, because you were such a key part of the first twenty-five years, we would like to invite you back to an Annual to meet old friends, to second-guess the judges like you used to do and to just have a super great time. This year's Annual will be held on the weekend of November 5-7, 1993 in Rolling Meadows, Illinois, a north-western suburb of Chicago. As always, we kick the weekend off with our judging

seminar so ably presented by our seven senior judges also known as the "Seven Samurai." Saturday, November 6, 1993 will be jam-packed with excitement starting with the annual meeting in the morning, followed by judging in the afternoon and finally the Annual Awards Banquet in the evening. If you have any branch left, Chicago promises to host a hospitably room in the fashion of all previous Chicago hospitality rooms where nobody will be left standing after midnight.

and please do try to attend. The dates are November 5-7, 1993. The show will be held at
6168-7151

Holiday Inn
3405 Algonquin Road
Rolling Meadows, Illinois 60008
4.5.6 708 258-5000

Room rates are \$80.00 plus tax per night. You can make reservations directly by calling the hotel. Note that his Holiday Inn offers a complete recreational facility including exercise and game room, pool, sauna and whirlpool.

Banquet tickets are \$26.00 per person with a cash bar. Of course, banquet reservations must be made in advance with the Show Chairperson.

Frank Barta
6521 Hillcrest Road
Downers Grove, Illinois 60518
708 852-8466

Call or write (or watch the bulletin) for more information.

Pat Allen
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708 627-805

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C 4 258-5504

AWARD POINTS STANDINGS

1992-1993 SHOW SEASON, FINAL ACCUMULATIVE POINT TOTALS THROUGH JUNE 28, 1993

ALBINO MALE	AOC MALE	AOC BICOLOR MALE
1. [Name] [Points]	1. [Name] [Points]	1. [Name] [Points]
2. [Name] [Points]	2. [Name] [Points]	2. [Name] [Points]
3. [Name] [Points]	3. [Name] [Points]	3. [Name] [Points]
4. [Name] [Points]	4. [Name] [Points]	4. [Name] [Points]
BLACK MALE	BLUE MALE	BLUE-GREEN BICOLOR MALE
1. [Name] [Points]	1. [Name] [Points]	1. [Name] [Points]
2. [Name] [Points]	2. [Name] [Points]	2. [Name] [Points]
3. [Name] [Points]	3. [Name] [Points]	3. [Name] [Points]
4. [Name] [Points]	4. [Name] [Points]	4. [Name] [Points]
Bronze Male	GOLD MALE	GREEN MALE
1. [Name] [Points]	1. [Name] [Points]	1. [Name] [Points]
2. [Name] [Points]	2. [Name] [Points]	2. [Name] [Points]
3. [Name] [Points]	3. [Name] [Points]	3. [Name] [Points]
4. [Name] [Points]	4. [Name] [Points]	4. [Name] [Points]
HALF-BLACK AOC MALE	HALF-BLACK BLUE MALE	HALF-BLACK PASTEL MALE
1. [Name] [Points]	1. [Name] [Points]	1. [Name] [Points]
2. [Name] [Points]	2. [Name] [Points]	2. [Name] [Points]
3. [Name] [Points]	3. [Name] [Points]	3. [Name] [Points]
4. [Name] [Points]	4. [Name] [Points]	4. [Name] [Points]
HALF-BLACK RED MALE	HALF-BLACK YELLOW	MULTI MALE
1. [Name] [Points]	1. [Name] [Points]	1. [Name] [Points]
2. [Name] [Points]	2. [Name] [Points]	2. [Name] [Points]
3. [Name] [Points]	3. [Name] [Points]	3. [Name] [Points]
4. [Name] [Points]	4. [Name] [Points]	4. [Name] [Points]
PURPLE MALE	RED MALE	RED BICOLOR MALE
1. [Name] [Points]	1. [Name] [Points]	1. [Name] [Points]
2. [Name] [Points]	2. [Name] [Points]	2. [Name] [Points]
3. [Name] [Points]	3. [Name] [Points]	3. [Name] [Points]
4. [Name] [Points]	4. [Name] [Points]	4. [Name] [Points]
SNAKEKIN SOLID MALE	SNAKEKIN VARIEGATED	SWORNTAIL MALE
1. [Name] [Points]	1. [Name] [Points]	1. [Name] [Points]
2. [Name] [Points]	2. [Name] [Points]	2. [Name] [Points]
3. [Name] [Points]	3. [Name] [Points]	3. [Name] [Points]
4. [Name] [Points]	4. [Name] [Points]	4. [Name] [Points]
YELLOW MALE	JUNIOR OVERALL	NOVICE OVERALL
1. [Name] [Points]	1. [Name] [Points]	1. [Name] [Points]
2. [Name] [Points]	2. [Name] [Points]	2. [Name] [Points]
3. [Name] [Points]	3. [Name] [Points]	3. [Name] [Points]
4. [Name] [Points]	4. [Name] [Points]	4. [Name] [Points]

ALBINO FEMALE	AOC FEMALE	BLACK FEMALE
1. [Name] [Points]	1. [Name] [Points]	1. [Name] [Points]
2. [Name] [Points]	2. [Name] [Points]	2. [Name] [Points]
3. [Name] [Points]	3. [Name] [Points]	3. [Name] [Points]
4. [Name] [Points]	4. [Name] [Points]	4. [Name] [Points]
BLUE-GREEN FEMALE	Bronze Female	DDI FEMALE
1. [Name] [Points]	1. [Name] [Points]	1. [Name] [Points]
2. [Name] [Points]	2. [Name] [Points]	2. [Name] [Points]
3. [Name] [Points]	3. [Name] [Points]	3. [Name] [Points]
4. [Name] [Points]	4. [Name] [Points]	4. [Name] [Points]
HALF-BLACK AOC FEMALE	HALF-BLACK RED FEMALE	RED FEMALE
1. [Name] [Points]	1. [Name] [Points]	1. [Name] [Points]
2. [Name] [Points]	2. [Name] [Points]	2. [Name] [Points]
3. [Name] [Points]	3. [Name] [Points]	3. [Name] [Points]
4. [Name] [Points]	4. [Name] [Points]	4. [Name] [Points]

GRAND OVERALL MALE

- JIM ALDERSON 13,847
- BOB VANDELANGENBERG 8,180
- GARY MOUSSEAU 7,880
- JIM MAIER 5,263
- STEVE WELLS 5,481
- STEPHEN KWANTLER 4,482
- TOM and PAT ALLEN 4,134
- LEROY and ROSE McCREARY 3,881
- JOSEPH ROSENBERG 3,881
- Bill Klein 3,732

GRAND OVERALL FEMALE

- MARK and PAM LEWIS 3,287
- FRANK BARTA 1,448
- TOM and PAT ALLEN 1,218
- TIM BERTS 1,211
- MIKE BREWER 1,188
- ELVIS and MARIE BRYANT 1,188
- M and M GOLIMOWSKI 1,188
- JIM and BRENDA THALE 1,108
- DAN WHITMER 873
- THOMAS THALE 888

BREEDER MALE

- JIM ALDERSON 1,384
- LEROY and ROSE McCREARY 880
- STEPHEN KWANTLER 872
- GARY MOUSSEAU 818
- RICH PLAWECKI 811

BREEDER FEMALE

- MARK and PAM LEWIS 1,840
- M and M GOLIMOWSKI 700
- THOMAS THALE 478
- ELVIS and MARIE BRYANT 388
- DAN WHITMER 388

PAN PACIFIC GUPPY ASSOCIATION MEMBER OF THE YEAR CONTEST

By Jim Alderson, DVM

President, Pan Pacific Guppy Association

The following suggestions are proposed for consideration for the Pan Pacific Guppy Association "Member of the Year" point system. Please note these general outlines are subject to membership approval at our next club meeting on

*I welcome suggestions
from members
with additional ideas for
point allocation in the
Pan Pacific Guppy
Association
"Member of the Year"
contest*

Sunday September 5, 1993 at two o'clock in the afternoon at West Covina Lanes. If any club member has additional ideas, please present your suggestions for consideration at our next meeting

1 Club Meeting Attendance - One Point 2 Bowl Show Participation - One Point 3 Selling Guppy Roundtable Advertisement Space - One Point 4 Guppy Roundtable Article - Two Points 5 International Fancy Guppy Association Show Attendance - Two Points 6 International Fancy Guppy Association Show Participation - One Point 7 New Pan Pacific Guppy Association Member Solicitation - One Point 8 Club Officer or Committee Chairperson - Two Points 9 Associated Show Planning - Two Points (Bowl Lighting Plans, Stands) 10 Pan Pacific Guppy Association Show Assistance - Six Points (Two Points Per Day) 11 Pan Pacific Guppy Association Auction Donation - One Point (Per Item Per Meeting)

Grand Prize for the club member accumulating most points is round trip airfare to next years Annual. Additional prizes will be awarded for runners-up in the competition. Remember these general outlines for the "Member of the Year" contest are subject to membership approval at our next club meeting. BE THERE

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Pan Pacific Guppy Association MEETING SCHEDULE

SEPTEMBER 5, 1993 2:00PM
West Covina Lanes Banquet Rooms
875 South Glendora Avenue
West Covina, California
818 960-3636

OCTOBER 10, 1993 2:00PM
West Covina Lanes Banquet Rooms
875 South Glendora Avenue
West Covina, California
818 960-3636

DECEMBER 12, 1993 5:00PM
David Wexler's Residence
11497 Bona Drive
Los Angeles, California 90006
310 300-4718

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PAN PACIFIC GUPPY ASSOCIATION AUGUST MEETING

By Don Kawano
Secretary, Pan Pacific Guppy Association

In the August 8, 1993 meeting of the Pan Pacific Guppy Association proved to be both exciting and informative. This was our first meeting at the West Covina Lanes Banquet Rooms. We will use this location for the remainder of this year except for our annual Holiday Potluck Dinner on December 12, 1993 at five o'clock in the evening hosted by the Vice President of our organization, David Wexler.

An extensive discussion of various crossers and their probable results was led by Dr. Jim Alderson. This discussion gave insight into possible crosses and provided historical background on the lineage of several of the current strains of guppies. This information should help various club members develop new strains and improve current strains of guppies.

At this meeting our club decided to hold bowl shows at all of our subsequent meetings. All club members will be allowed to enter two males and one female guppy in the monthly competition. There will be four categories in which male guppies may be entered: AOC, Half-Black Solid and Variegated. There will be one female category. For the first monthly bowl show on September 5, 1993 please bring your fish in bags. Three drum bowls will be issued to each club member with the understanding that they are responsible for returning the bowls for our clubs and all International Fancy Guppy Association sanctioned bowl show competition.

Each member is readily encouraged to participate in our monthly bowl shows. Bring whatever fish you have available

Not every fish need be ideal. Work in progress or non mature fish are welcomed to afford each hobbyist the benefit of ideas and pointers from club members on how to improve the quality of your fish.

Discussions were conducted regarding how long monthly bowl show points will be accumulated or what types of awards will be given, or whether these points will be included in the annual Pan Pacific Guppy Association "Guppy Person of the Year" competition which offers a Grand Prize of round trip airfare to the International Fancy Guppy Association Annual Show.

Hope to see you and your fish at the next meeting on Sunday September 5, 1993 at two o'clock.

DONATIONS NEEDED

All members are readily encouraged to solicit product donations from mail order warehouses or tropical fish stores you frequent for the First Annual All Species Auction hosted by the Pan Pacific Guppy Association.

Please note each contributor of a product donation valued at ten dollars or more is entitled to a one month business card sized complimentary advertisement in Guppy Roundtable. Product donations valued under ten dollars will be entitled to a one month complimentary "strip ad".

The person soliciting the product donation will receive one point per donation towards the annual "Member of the Year" award.

Pan Pacific Guppy Association

FIRST ANNUAL ALL SPECIES AUCTION

The PAN PACIFIC GUPPY ASSOCIATION proudly hosts their First Annual All Species Auction on October 10, 1993 located at

WEST COVINA LANES BANQUET ROOMS
875 South Glendora Avenue
West Covina, California
818 960-3636

World renowned breeders of fancy guppies from around the country have donated fish for the upcoming auction. In addition blue green red shaker and other fish are also available. Other species of fish available for auction include Betta, corydoras, discus, mollies and snails. Prior to the auction, guests will be allowed an opportunity to view the various strains of fancy guppies on display in drum bowls including an itemization of the breeder name and strain. Donated equipment products available for auction include filter foods, medications, rock plants, aquarium software programs, crabs, shrimp, eggs and water conditioners. This FREE ALLY SPECIES event is open to the general public who are ready encouraged to attend the auction and meeting. Complimentary copies of Guppy Roundtable will be available to all attendees who join the Pan Pacific Guppy Association during the auction or meet even. Gifts will be auctioned in person, mail and telephone. Scheduled events timetable is

2:00 - 4:00 PM Meeting of Pan Pacific Guppy Association

4:00 - 5:00 PM Inspection of Auction Items

5:00 - 9:00 PM GRAND AUCTION OF FISH AND EQUIPMENT

For further information or donations, please contact Jim Alderson 909 504-4233. Details Paper 310 568-0945. Website 818 960-3636.

PAN PACIFIC GUPPY ASSOCIATION

GUPPY ROUNDTABLE

YOUR GUIDE TO SUCCESSFUL GUPPY BREEDING

- ~ Are you thinking of breeding fancy guppies, but do not know how to choose the right equipment?
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GUPPY ROUNDTABLE

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RAISING GREAT GUPPIES PART TWO

By Jim Anderson, D.V.M., President
International Fancy Guppy Association
Pan Pacific Guppy Association

Let's back up a bit and assume that you have purchased that great trio of gups from the world famous breeder for the big bucks and you have that first big drop of fry. Most breeders make their biggest mistakes with tank maintenance and water quality. There are many pitfalls waiting for you as you try to get these fry to big adult show gups.

Putting fry into a new tank. Start with a sterile tank. After years of not paying enough attention to breaking down my tanks, I have found it absolutely necessary to do so to prevent the spread of disease. Put in one half cup of rock salt when starting a new tank with fry. This tends to prevent shock from the fresh water and keeps the baby brine alive for about eight hours or more. Whether you use a sponge filter or a box filter after five days of heavy brine feedings you are likely to have an ammonia problem. I feed my fry so heavily that at the end of the first five days there is a layer of dead shrimp on the bottom of the tank in addition to siphoning about forty percent twice weekly usually squeeze some of the nitrifying bacteria from a sponge filter from a very healthy

tank into the fry tank on the first day. This will dramatically enhance the cycling or development of nitrogen for the nitrogen cycle in the tank. Another aid in setting up a new tank is the compound potassium permanganate. Soak my sponge filters in a solution of this for at least twenty-four hours before putting them into a new tank. The potassium permanganate sterilizes the sponges without destroying them and is an excellent flocculating agent. There is suspended matter in the tank. It will cause it to flocculate and adhere to the sponge filter thereby clarifying the water and enhancing the nitrogen cycle.

Feed the young fish mostly baby brine. They get baby brine three times a day until about one month to six weeks of age, then cut the brine back to twice daily at six weeks of age to prevent the development of fatty livers in the male fish overly cooked.

When using a dry food, make sure you use the highest quality processed food you can buy. I have had problems with foods which contained fish meal that was improperly cooked.

Continued on page two, column three.

I WILL HAVE WHAT SHE JUST HAD

What do women want? The question is a little one for the average male Trinidadian guppy. And the answer may even ring true to other species of male when it comes to choosing a mate, says biologist Lee Dugatkin of the University of Kentucky. A female Trinidadian guppy wants the same one her friend picked.

"People who study animal behavior have always assumed that female mate choice is an innate thing," says Dugatkin. In guppies, for instance, the literature says that females are

innately attracted to males with certain color patterns. But the

literature also talks about copying one female choosing the same mate already chosen by another, or "unexplored possibility Dugatkin who summarizes decided to experiment.

His method was to stage a guppy peep show to see if he could influence the mate choice of a guppy voyeur. The voyeur was imprisoned in a clear container at the center of a ten-liter aquarium. At each end of the aquarium, in a separate chamber that was visible but not accessible from the main tank, Dugatkin placed a male guppy. Then he isolated a second female at one

end of the main tank, near one of the two males. As she and her Dugatkin-enforced choice proceeded to go through guppy courtship rituals, Dugatkin and the voyeur watched. The latter apparently unaware that he even had been staged for her benefit. Afterward Dugatkin set the voyeur free to choose a mate. First giving a different female from the acquaintance.

Amazingly, seventeen of the twenty times Dugatkin ran through the scenario, the voyeur copied her

predecessor's choice," presumably on the grounds that a male already vetted by one female is more likely to have what

it takes, or so goes this theory. Moreover, when Dugatkin first allowed the voyeur to choose a mate on her own, she then showed her another female, making the opposite choice, she tended to switch notes. "We can put a guppy to reverse its choice if we give it a cue that says the original choice was not the right choice," says Dugatkin. "That cue is that copying must be important. It can override an innate preference.

Editor's Note: This article was submitted by Tim Brady and reprinted herein with permission from the October 1992 issue of Discover Magazine.

RAISING GREAT GUPPIES

(continued from page one)

Remember, the fish man is the whole fish ground up including the intestines, which may harbor nishatode eggs. Rule eggs and a host of other parasitic, bacterial and fungal diseases. You must be scrupulously clean about the fish foods you allow in your fish room. This means no ubifex bloodworms, mosquito larvae or any other foods which come from an unknown source.

Most often when a tank of guppies goes bad it is due to a mistake you have made lowering their resistance. For example, I do not add my water at all before introducing new guppies. If I do, I introduce nitrifying bacteria and add salt to that new tank of fish within two weeks they will clamp up and will probably lose them. It is better to add nitrifying bacteria from a filter than to use used guppy water in setting up a new tank. The used water may be high in nitrates, nitrites or dissolved organic material including growth suppressing hormones which may hinder the development of the fry.

Next month we will cover what to do when those fry do not develop as you expected. Or as Paul Gorski puts it, "When God gives you lemons, make lemonade."

MICROWORMS: THE PERFECT LIVE FOOD?

By Oliver Herwig
Reprinted with permission from
Aquarium Fish Magazine, December 1990

The key to successfully breeding and raising any species of fish is to have the proper food available at the proper time. I am sure that many of you have struggled to get brine shrimp nauplii to feed in time to feed newly-hatched fry. It is frustrating to see the new babies starve because the brine culture did not

work or because the newly hatched fry would not accept the shrimp.

(Many varieties are too small at birth to take shrimp). What is needed is an alternative live food.

I believe that microworms are the perfect first food for fry and they complement brine shrimp nauplii in a feeding program. They are easily cultured and can be available on a continuous basis to feed those unexpected batches of fry.

Microworms are small, colorless nematodes, approximately one millimeter long. They can be cultured easily by the home aquarist. Microworms are not sensitive to their environment and will thrive at most room temperatures. They are easy to feed to your fish and are readily accepted by fry and most small fish. However, these worms are too small to interest the larger varieties of fish kept in home aquariums. As soon as your microworm culture has been activated, the only attention it requires

is periodic subculturing. This is done to avoid any offensive odors caused by the culture medium going sour. It also prevents the culture from drying out. A single culture can be sub-cultured into as many cultures as you may need present and future feeding requirements.

Microworm cultures can be obtained from pet stores, through mail order sources listed in the classified

section of most hobby magazines) or from other hobbyists. They are even available

in a dry, vitamin-enriched form (just add water) sold under the trade name of Nemus.

Once your starter culture is received, you should transfer it to two or three containers in which you intend to grow the worms. Starting more than one culture ensures a back-up if one should crash. The containers can be any small refrigerator dish.

When it comes to nutritious live food for fry and small fish, this may be what you are looking for

freezer container, glass jar or the like. Use square half-pint-size freezer containers. Their translucent quality enables me to see the worms making their way up the sides. The container should have a secure-fitting lid with six to eight one-quarter-inch holes drilled in it. If the culture container is airtight, the worms will perish from lack of oxygen.

The next step is to prepare a culture medium. The medium can be most any kind of prepared cereal including oatmeal baby food (Pabulum) or even yellow cornmeal.

The medium is prepared by mixing in enough tepid water to create a paste that is somewhere between the consistency of a thin milkshake and the consistency it would be prepared for breakfast. Place this in the container to a depth of one-quarter to one-half inch. Next add a two-ounce pinch of brewer's yeast to the top of the medium and then add your starter culture.

At temperatures between sixty and eighty degrees Fahrenheit (sixteen to twenty-seven degrees Celsius) your culture should be ready to

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GUPPY ROUNDTABLE

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STERILITY IN FANCY GUPPIES

By: George McCroskey
Guppy Associates of Greater Cleveland

Several months ago I wrote an article for THE WET PET GAZETTE on the subject of deformed bodies appearing in many of the fancy guppies seen today. This subject surely is one that most guppy breeders have noticed and even commented upon among themselves, but it may have been quite a shock to some average hobbyists who occasionally have picked up a pair or two for their attractive appearance, only to find that the fish's offspring look rather peculiar. As stated in the article, deformity among most strains of guppies seen today is accepted with resignation, due to no real "cure" being known without going all the way back to the original strain, which is not only impractical but unthinkable.

Right along with this side effect of deformed bodies, of breeding and improving guppies is another fact that is not so obvious but is so insidious as to cancel out many breeders' efforts entirely: refer to the effect of partial or total sterility among the color strains of guppies being bred today.

Ever since the advent of the albino type of guppy, this effect has been noticed and fought, although it has

never been a real threat to the other kinds of guppies. However, no guppy breeder with several years of experience will admit that this is a problem. Guppies being the prolific livebearers they are, there has always been enough new stock being developed along parallel lines in some other locality to offset a dead-end breeding program, which can happen to anyone. All that had to be done was to buy, beg or borrow enough strange fish to get new blood-lines started along a different course. Recently, within the last three years, all of the color strains are beginning to appear with a certain amount of sterility. The very intriguing part is that there does not seem to be just one kind of sterility, or even enough evidence of its appearing to be more than an annoying handicap. As the old saying goes, "What is one more trouble among so many?"

Proponents of gold guppies, in particular, have observed some of the ways that sterility has become evident in their stock. These kind of breeders are not really plentiful, and for that very reason are outstanding. Gold guppies are one of the kinds that somewhat parallel the more popular guppies, though each is a separate kind and strain with its attendant problems, of which the inability of the fish to breed well has slanted their advancement.

(Continued on page five)

MICROWORMS: THE PERFECT LIVE FOOD?

(Continued from page three)

use within three to five days. It is easy to see the tiny worms making their way up the sides of the container. When held under a light, the surface of the culture will appear to be shimmering; this is the movement of millions of microworms on its surface.

To feed your fish, scrape the worms from the sides of the container using a wooden stick, a plastic knife, your finger or any other object that works for you. Rinse the worms into a glass of water and dispense with an eye dropper or baster.

The theory behind this form of culture medium is the microworms feed off the yeast which in turn makes a meal from the aerobal. As the culture starts to age it will become thinner. If it starts giving off a sour smell it is time to start another microworm culture. To avoid any smelly problems, it is wise to sub-culture every two to three weeks. To do this, simply prepare a new mix of medium, add yeast and a small portion of your existing microworms. Now you are ready to begin again, with very little effort.

You will find microworms are an excellent substitute for freshly hatched brine shrimp in feeding new fry. They are always available, readily accepted, easily cultured and inexpensive. Once you have invested in the initial culture, you can maintain an infinite supply of microworms if you sub-culture regularly. In the three years that I have been culturing microworms, I have never had a culture fail.

Go ahead and give microworm culturing a try. They are readily available, easy to raise and inexpensive, and your new fry and small fish will love them.

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Davidene Tall
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Los Angeles, California 90034

In talking to the people who are working gold guppies, as with the albino, I have been strenuously advised that a very selective breeding program is necessary to bring the fish along at all. This means that one selected for either male or female depending on the breeder can be the deciding factor as to whether you junk, or continue a line of guppies that has been watched for literally years. Now when this one fish refuses to breed, a real problem develops.

Should you settle for a less desirable fish, keep trying to breed this one fish or junk the whole business and go to photography? Each individual makes his own decision, and ALL of these suggestions have been utilized, plus a few more have not even listed.

Generally speaking, since all the people breeding guppies in quantity run into the problem of total or partial sterility in the breeding stock, more and more of them are going in for "group breeding," that is, using several males

to one female or several males to several females. This is strictly dependant upon the fish used and the size of the breeding tanks. Some of the better strains of red broadtail guppies breed ninety-eight PERCENT live, and even his offspring two percent is usually a little noticed fluke, such as, at configuration or color irregularities. So group breeding is quite successful if a little selective breeding of the new breeders is

used (breeding only the best of the group for selected characteristics) the line will go on indefinitely and possibly improve. With some of the newer strains, such as the half-blacks, and especially with the ones that have been developed with red tails, there is no other way to get young fish other than using this group breeding method. As soon as a few fish of some kind are preferable to no fish at all, am now experimenting with at least three

lines of half-black reds, and all of them are difficult to breed.

It has been well known for some years that young virgin female guppies are the best kind for breeding. Others have stipulated that no female should be held

virgin for much more than four months, because of the difficulty in getting them impregnated. Some of the theories advanced are that the nutrients normally used for the growth of new litters go instead into body growth and cause fatty formations around the reproductive organs, which in turn retards impregnation. From my own experience, all female guppies that remain virgin and get very large are almost useless as breeders. Also, virgin FEMALE guppies grow at about twice the rate of the bred ones. MALE guppies that are isolated from females grow much slower than normal, not only in body size but also the coloration is slower. So the best thing to do with a new litter of guppies is to pick out approximately four females for future breeding and leave all the rest of the litter together. At five months, ATTEMPT to breed them with one selected male guppy. If no young appear, add two more males as near in appearance to the first choice as you can find. As soon as definite signs of pregnancy appear and this is very hard to determine among the half-blacks, separate the females, if you have the tank space. If not, let the females drop into the main tank. As the young mature, keep an eye out for the best looking fish. Again, pick four females among ensuring young, but do not breed them with closely related fish. Either carry a second line of

(Continued on page six)

PROTEIN ZONES

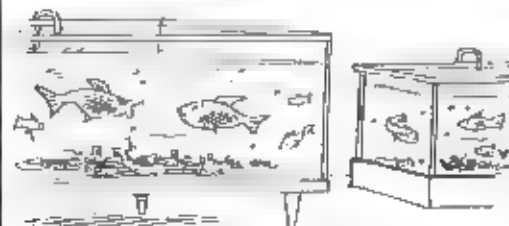
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related fish or go to an out-cross of some known breeder's males which, preferably, are distantly related. (Such as the person from who the fish were originally obtained.) If this is not done there is a good likelihood that a percentage of the descendants will be sterile. This is known as inbreeding sterility.

Thus far we have mentioned two kinds of guppy sterility, abnormal growth and inbreeding. At least one other it apt to appear. (There are actually many more kinds of sterility but they are uncommon.)

Diet deficiency is infrequently a cause for guppy breeding troubles; but due to the hidden nature and the uncertainties of what each fish may be eating it does happen. Normally the lack of vitamin E is the basic cause, though the absence of certain other nutrients may cause an indirect deficiency in the general health which shows up in this way. Conditioning of the breeders, which is a policy recommended for egg-laying fishes, is also important for guppies. As an advocate of a varied diet, especially those foods blended for specific purposes, this is the best means known to prevent this occurrence.

From all of the above information, it is apparent that there is a definite increase in sterility among guppies.

This sterility is more common in the newer varieties, but it is also showing up among the more inbred strains of the older types. As the guppy comes nearer to the point of one hundred percent true breeding, it will be more prevalent (rather than less). The only cure will probably be to start selecting breeding stock for the sake of propagation rather than continuing the methods now used to get a larger caudal fin or new color combination. Though guppy breeders guard their secrets very closely it is possible that some are already doing this in try to improve certain strains. As the accelerated methods of guppy growth, such as combinations of chemical compounds and hormones, are experimented with there will not only be many freaks and mutations showing up, but also sterility. Many guppy hobbyists deplore some of the methods currently in use but have to go along due to pressure from the competition.

A national guppy group under the impressive name of "International Fancy Guppy Association" top priority is to get working rules for all grades of guppy breeders. This of course is a big step in the right direction and will be interesting to all concerned because it will set the trend for the future development of the fancy guppy.

WHAT IS CHLORAMINE?

Chloramine is a combination of ammonia and chlorine added to drinking water by city municipalities to disinfect drinking water. Chloramine is a very stable form of chlorine. When chlorine alone is used in the water supply the chlorine may react in other ways aside from its intended use as a disinfectant. However due to the stability of chloramine side reactions are no longer a threat and the water is safely disinfected.

Just as with water treated with chlorine, water treated with chloramine is unsuitable for tropical fish. Once again, however, due to the stability of chloramine, regular dechlorinating products do not assure the complete removal of chloramine. Neither does exposing the water to sunlight nor allowing the water to stand for a period of time.

If chloramine is not removed from the water in your aquarium any fish present or added to the water will almost certainly die. Death is believed to be due to anemia created in the fish from exposure to chloramine. This anemia occurs when chloramine is absorbed by the gills of the fish. From then on, the fish's blood is no longer capable of carrying oxygen. Depending on the amount of chloramine in your water, death of the fish may be quick or delayed.

BEFLDDLED, CONFUSED, MYSTIFIED?

Have a question regarding any aspect of aquarium maintenance or fancy guppies? An exciting monthly feature of **Guppy Roundtable** is a column entitled "Some of This, Some of That" wherein subscribers' questions are answered by the current and former Judging Board Chairmen of the International Fancy Guppy Association: PAUL GOREK and STAN SHUBE. Do not miss this opportunity to learn the secrets of two of this country's most respected and successful breeders. Please forward your questions for consideration to:

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CHOOSING THE RIGHT FEMALE FOR BREEDING

By Bryan Chen
Pan Pacific Guppy Association

A lot of Guppy Breeders quickly realize how important it is to choose the correct females for breeding. Even if you pick the best male and you breed it to a female that carries bad characteristics you will see a fast decline of the quality of your strain. Although strongly believe that a good basic understanding of genetics will assist a guppy breeder in understanding how to choose the right guppy, there is a visual way that can be used.

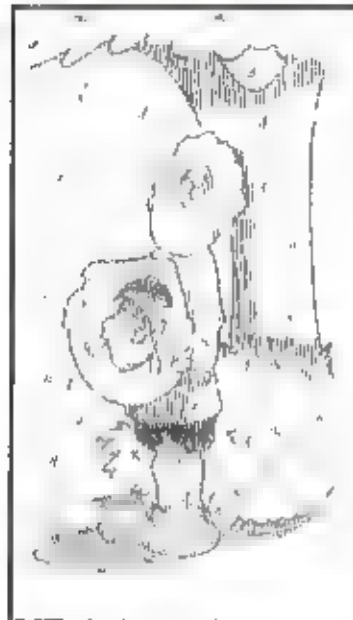
Many features are hidden in the female due to the lack of male hormones. So how can a Guppy Breeder tell the difference? One way is to use your ability of observation and keeping records of your results. To further explain this let's take an example. Brood of babies resulting from a female bred to a single male. Observe the shape, size, and color of the female body and finnage. Make a note of this and keep a record. (Many times I keep the female long enough to look at and will write the description of that female on the tank of babies from that female.) Know that many articles say don't but for this purpose you must keep all the babies until they are three to four months old. Once you better understand your strain culling is the correct thing to do. By raising all of your guppies you can take a realistic evaluation of your brood of guppies. Look at your males first and take note of what percentage of them are considered show quality guppies. The percentage you

observe will give the approximate odds for choosing the right females if chosen by random. If your strain has twenty-five percent good males

your odds are probably one-in-four to choose the right female to breed.

So how can we reduce the odds in choosing the right female? Let's take tail shape to explain how to do this. If you observe that twenty percent of your males show short bottom rays in their tails that looks like someone almost cut the corner off. You may also observe that about twenty percent of your females show the same shape cut on the lower rays. I have observed this in some of the strains I have raised and proved this to be the problem. You probably do not want to use

them but the rest of the females show round, nice delta tails and shark tails (elongate toward the top of tail like a Shark. The lower rays are shorter but does not have an abrupt decrease). Now which one? The solution is to pick a female with each type of tail shape and breed them to males (I prefer only one male that best represents the best features with the desired tail shape. Keep each brood separate from each female. Raise the babies and take note which female produced the best and highest percentage of good shaped tails in the male guppies. You will now know what tail shape to choose for that strain. It is also important to note that angle of the female's tail will affect the angle of



combine all of the features but usually you do not have to. Your strain may show an extremely low percentage in only two or three features you would like to improve the percentage on. Usually it is tail shape, tail color, dorsal color match and body size. Below is an example chart of things to observe.

More features can be added or taken away from this chart in your observation to choose females. If your strain shows too many bad features and shows a very low percentage of show

FEATURE	WHAT TO LOOK FOR
Body Size	Overall size, body shape
Tail Color	Tail color, solid or variegated, missing color on portion of tail
Tail Shape	Delta, irregular, round, shark
Tail Size	Tail size (large tail in female will not guarantee large tail in male)
Tail Angle	Angle of tail (e.g. sixty degrees, forty-five degrees etc.)
Dorsal Color	Dorsal color, dorsal solid or variegated
Dorsal Size	Dorsal shape, dorsal size

the male guppy born from that female.

This may seem impossible if you

quality males, it may be best to find a more consistent strain to cross to to improve your strain of guppy.

ADVISE FOR THE NOVICE GUPPY BREEDER

By Jack E. Kaulfeld
Chicago Aquarium Society

The old saying that an ounce of prevention is worth a pound of cure truly applies to the tropical fish hobby. If we can prevent a disease or check it before it has progressed very far, we can save the life of the infected fish and prevent its spreading to other healthy specimens. When a novice starts his tank for the first time, he should be sure his fish are healthy and in good condition. He should read up on the care and maintenance of an aquarium before he starts one of his own, so as to be able to recognize trouble if it starts.

Assuming that a beginner has

started a tank and everything goes well until a chilly night causes a sudden drop in temperature and in a few days all the tropicals, especially the live bearers, have the so-called shimmy. This is a wobbling motion from side to side, yet still staying in the same position in the tank. The shimmy is caused by any sudden rise or fall of temperature, but it is not a fatal disease. In treating this disease, found that the best cure is to isolate the sick fish in a smaller aquarium, preferably a one gallon tank, and add a teaspoonful of Epsom Salts and one teaspoon sea salt to the water. Aerate the water and keep the temperature about seventy-eight degrees Fahrenheit. Omni feeding. Keep the fish in this tank about a week after which they are usually cured.

Sanitation is a matter of prime importance. Any disease can result from a dirty tank. Always remove dead grass and uneaten food. A fish kept in an unclean tank can develop a reddish gill or red spots on the body similar to an infection. The base of the tail gets inflamed and the whole fish has a bloodshot appearance. In treating a case of this kind, found the best thing is to obtain some spring water or rain water, raise the temperature to eighty degrees Fahrenheit, add one teaspoon salt to each gallon of water, pour the infected places with mercurchrome and add one capsule of neomycin and one capsule of sulfa per ten gallons of the salt solution with the fish. Keep the tank absolutely clean, feed only daphnia and shad roe and in small amounts until the fish is cured.

Another deadly disease in both tropical and gold fish is Dropsy. (continued on page nine)

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Up to date there is no definite cure for this disease. It appears as a swelling or thickening of the body in the final stages the scales of the fish stand out on their sides. In this disease water seems to accumulate in the fish and cannot pass out. Only once have been able to remove the water without killing the fish. This was in a swordtail a large specimen, felt he would surely die in that condition, so punctured the swollen area with a needle and released the water. To my surprise all the water drained out and the fish was not troubled again with that disease. I do not recommend this, however, as a cure. Sometimes it works and other times it does not. hope some day some real cure will be discovered for this dreadful fish disease. Several breeders have reported a modicum of success in adding a tablespoon of salt and a tablespoon of epsom salt to each gallon of aquarium water in addition to medicating the fish with one

capsule of neomycin and one capsule of sulfa to each ten gallons of water. believe the main cause of Dropsy is the diet, over feeding of red worms (Tubifex) caused it several times for me.

Before you mortgage your home and buy the necessary equipment to give yourself a fighting chance

of producing show quality fish, it is only fair that lot a few of the problems concerned with "deltas"

is the one that most of the "big wheels" aim for. If you want a better chance of winning trophies, stick to sword tails or velt tails. The competition is less severe. You will need lots of time and equipment to produce good fish in quantity that can compete against the pros. You will need many tanks, and time to

feed the fry their newly hatched shrimp, eight or ten times a day.

At all shows that am aware of the pros are there to win trophies and thereby get a reputation in order to charge higher prices do not condemn this, although I would like to see the pros and plain hobbyists competing in separate

One real problem for the novice guppy breeder is finding good breeding stock

classes, not against each other. Nearly all who "show" in various classes are in business, to a point.

One of the real problems is the finding of good stock. I have never seen a "red vel a" that deserved a trophy. Some feature a true delta has intense red body color, body size and proper tail carriage) a combination of two or three of these, never the perfect specimen. Admittedly, have not seen the "top shows" nor have I paid as much as fifty dollars for a pair (with no guarantee that the fry will result in adults, a few of which could equal the parents.)

Meaningful information is scarce. Very few who are successful will write articles or letters. A few try to be helpful by writing for bulletins and magazines; unfortunately none has time for any correspondence.

Had enough? There's more, but it involves human shortcomings, and we know about that sort of thing. When fame and big money are involved, some people are weak. And yet, the fancy guppy is a challenge and is fun! If you have guts, patience, and a willingness to work, you can accomplish near miracles. He who produces perfect guppies, accomplishes much more than the breeder of Cardinals (or like fish). He deserves as much respect as any hobbyist known to me.

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GUPPIES BETTER THAN PUPPIES AS PETS

By Bill Smith
St. Louis Post-Dispatch

Five reasons why fish make better pets than dogs.

1 Fish will not bite the meter reader.

2 Fish will not ruin your best rug.

3 Fish will not knock over the neighbor's garbage.

4 Fish will not embarrass you when someone comes to visit and

5 In an emergency you can flush a fish.

Life in a fish bowl may be a major drag, but life just outside a fishbowl can be a little slice of aquatic heaven. Just listen to a few passionate a-fish-ionados.

"Raising fish is like eating peanuts," said Ralph Wilhelm, who at age seventy-one is the senior member of the Missouri Aquarium Society Inc. "Once you get started you can not stop."

"My dad is a fish nut," says thirteen year old Rachel Millinger of

Webster Groves, Missouri. "He has names for all of them: Bob, Sammy. He has even got a gourami that eats so much we call him Pig."

"Some people do not get into cats or dogs or birds," said fish keeper Jim Lavins. "But fish are neat; they are clean and they are peaceful."

Fish hobbyists for the most part first were dipped into the waters of fish-keeping when they were children.

Chris Roberts, 34, a preschool teacher and part-time dealer in dollhouse miniatures, said he and his brother Noel got involved in fish when "Dad gave us a guppy tank."

Eventually the brothers began raising and breeding fish in the basement of their parents' home. Now the basement furnace room has been taken over by several dozen aquariums, from ten-gallon tanks to fifty-gallon containers.

Roberts' current interest is working to breed an endangered cichlid found in Lake Victoria, Africa.

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CLUE ON A MISSION: The Pan Pacific Guppy Association is looking to purchase several different strains of guppies not currently within our club. Anyone with nice BLACK, BRONZE or MOLT DELTAS for sale or trade, please contact Gaylene Tait, 3619 Marlene Avenue, Los Angeles, California 90034, 310 658-1341.

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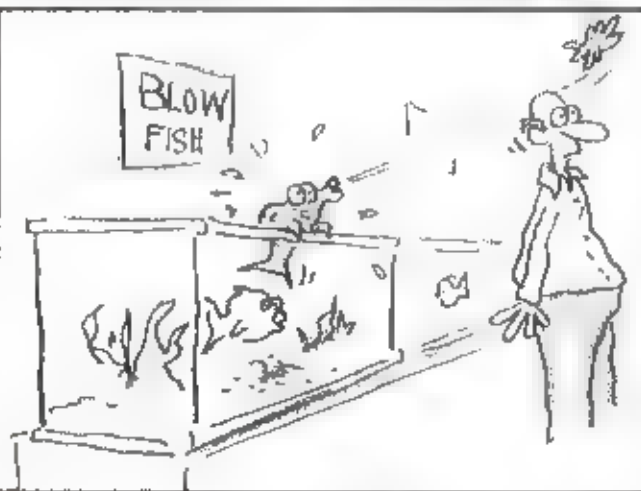
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BEGINNER GUPPIES: INITIAL CONSIDERATIONS

PART ONE

By Bruce Jung
Pan Pacific Guppy Association

I am writing this article with a three year experience in show guppy rearing. This may not seem like a beginner's viewpoint but I have just passed through and continue to face many problems, so I feel that I'm beginner enough.

Since my first trio, I have had several drops with many different fish. I still even have the original Singapore strain I bought to 'practice' with. I now have a 'small' number of tanks for guppies (3x fives, and 6x tens). My fish even won first place in

Red
Bicolor
Delta Male
Bicolor
Jaws
now brays
my limited
experience
in order to
help my
fellow
beginners

and for others to hopefully point out the errors in my ways.

There are many things to consider before you get your first trio. Where am I going to put them? Have too many fish and not enough tanks? These questions are related, but quite different. The first question is addressing whether you are going to build a fish room like Jim Alderson or have tanks scattered around the house like Don Kawano. You need a location where you can do water changes, drip water clean up easily in cases of large water spills, and to slow the large amounts of gear required for proper guppy raising. Simply put you will need plenty of space to expand

in my set up I'm limited to a small

area. So I have just made enough space to access the tanks for culling and water changes. My tanks are set up on a simple home built rack that must be sturdy enough to withstand earthquakes (at least count three). Some things like about my set up are close to sink for water changes, enough electrical outlets to run pumps, filters, lights, and heaters, and storage space for all the fish junk. Some things included on my wish list for my next set up is more fish, more tanks, and more room. Guppies need a lot of room to develop and it can be hard to choose champions as a beginner, but culling is a key (more on culling later). Tank location and

space must be considered before setting up the first tank because soon after others will join it.

The second question is addressing how many tanks you can manage or are limited. This consideration is highly dependent on how many strains your caring for or developing. Jim has suggested a minimum of six tanks to keep a strain (obviously more is better) but I think it is possible to do with less if you ruthlessly cull. This skill is easier for an experienced breeder because they know what fish to throw out and which one has show potential. For the beginner and me, this decision process is the hardest. Each and every try is

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ours and has great potential. But consider this, every try in the tank is competing for food and clean water. By removing the fish that are not up to par, your fish that are show quality will be able to grow up to their potential. For the beginners, this particularly is an important point that must be learned rapidly. Beginners and experts alike must constantly learn how to skillfully cull their tanks.

Beginners beware getting your first trio will lead to many joys and disappointments. If you are careful, you can avoid many mistakes by listening and reading about the experiences of the many talented and experienced guppy breeders. When you get your first trio be sure to have enough room to expand. You will definitely end up with more tanks than you initially planned. When you run out of room remember to cull. Everything in your tank cannot possibly be show quality fish. Cull and let the champions grow to their potential and soon we'll see you at the annual awards banquet.

An easy mathematical equation to accurately determine the volume of your aquarium is, multiply the inside dimensions of length times width times height and divide the result by 2.31. This will give you the capacity of your aquarium in gallons.

ALGAE AS A FILTER MEDIUM

By Midge Hill
Excerpt of Guppy Roundtable, May 1974

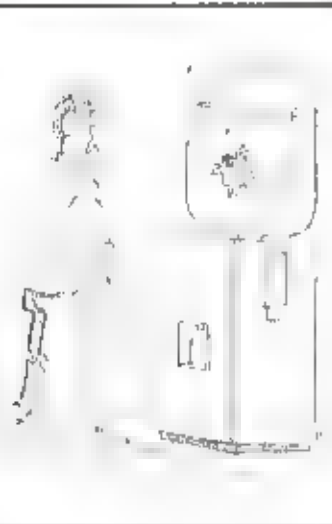
As everybody who has ever been to my fish room knows, I swear by some form of greenery in all my tanks. For the simple reason that over the years I have consistently found that fish in tanks with green stuff do better than fish in totally bare tanks. Not only do the fish have better color and size than those in tanks without greenery, but invariably these tanks are free from slime and brown algae build up and the water stays much clearer. This makes me happy as it means less time and labor needed for cleaning tanks. It also seems to make the fish happier as they love to pick away at the greenery between meals.

For years I have kept fox tail, hair algae or poited (for easy removal during tank cleaning) and because how else could I plant it in a bare bottom tank? cryptocorine in all my fry, female and adolescent male tanks. But until recently did not care keep greens in tanks with mature males. They love to swim

around and through the plants and will too often a fragile flowing fin catches on a piece of green and the caudal splits

in working out the solution uncovered what to me seems like a bonanza. Not only can I now keep greens in tanks of mature males, but I have discovered a way that keeps the filters in all my tanks clean longer. Again, I am happy! Less time and labor cleaning filters. The solution seems simple, but it took a long time to stumble on it. I use the usual corner filters with a layer of charcoal topped with a layer of dacron wool. But now I add a flat mat layer of hair algae on top of the dacron.

Simple, yes but the results are so beneficial that all my filters now wear green caps. The biggest benefit is cleaner clearer water with less frequent filter changing. As the fish debris is sucked into the filter the algae biodegrades the ammonia products and converts them to less harmful products. Only a minimal amount of 'junk' goes on down into



the dacron wool and still less into the charcoal. Filters can go several weeks without even looking dirty in spite of heavy feeding. I also keep red ramshorn snails in all tanks to dispose of leftover food and convert it too into fertilizer for the algae. The algae filter provides an ideal environment for helpful bacteria sort of a modified biological filtration. Since the algae in the filter gets first crack at the fertilizer there is virtually no algae growing elsewhere in the tank. There also is almost no slime buildup.

Even fish with bulging bellies can be seen constantly nibbling at the algae. It is an established fact that guppies are fond of high quantities of vegetation. They must know what they need and like. And with the algae now flat against the filter medium there is no danger that the males will swim through it and catch their tails.

If algae filters and/or plants do not appeal to you another easy way to provide greens in your tank is to keep strips of glass or plastic in a jar in a window. Algae grows quickly in the sunlight and the mossy strips can be put in the tank. Fry seem to grow faster with this rich, green growth to nibble on.

MY PLEAS FOR HELP ARE BEING IGNORED

Unfortunately my previous cries for help have been largely ignored by most breeders. Everyone's assistance is needed to compile an up to date list of breeding stock for sale or trade as well as other related items that you might be searching for, articles, books, bulletin magazines, old publications, etc. will also help arrange club contacts for those hobbyists trying to join or start a club in their area. What need from each of you is for you to send me your name, address and telephone number, if possible. Explain what strains you are working with or looking for and what is available. Also, please note if you are willing to accept correspondence or telephone calls requesting information. If you are looking for breeding stock you can make your initial contact through the Clearing House. I will make every effort to put you in touch with a reputable breeder. Send information and inquiries to:

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AMMONIA POISONING
(OR, NOW THAT I HAVE IT HOW DO I GET RID OF IT?)

By Rose Ann Fazio
New York Aquarium Society

One of the most dangerous problems in the home aquarium is that of ammonia poisoning. Much has been written on how to prevent it, but what to do about it once it occurs, has not, in my opinion, been covered to any extent. I will try to explain what symptoms to look for and how to correct the problem once it has happened.

Let me explain that ALL of the information is based on personal experience. After having baffled

ammonia poisoning on four separate occasions under four completely different sets of circumstances, I feel well acquainted with the subject, in my usual backward manner. I will chronicle this for future reference, hopefully so, will not make the same mistakes again - a sort of "close the barn door after the horse escapes" article.

First let me explain what ammonia poisoning or shock is in very elementary terms. If you are in need of a more detailed explanation there are many books from which you can do further research. I only want to capsule the nitrification cycle as it pertains to this particular problem in freshwater tanks. Ammonia is the highly toxic material produced by fish through excretion of waste products, and by purification of other materials, including decaying plants in an aquarium. It is broken down first to nitrites (both salts and ions), which in turn is broken down into relatively harmless nitrates (also salts and ions). This is done

by denitrifying bacteria and is called the "nitrogen cycle". The entire system is dependant of a balance of enough "good guy" bacteria (nitrosomonas and nitrobacter) to break down the harmful waste products into harmless by-products and nutrients. If one part of the cycle gets out of balance, the result can be a surge of ammonia with the possibility of ammonia poisoning. I say "possibility" because not all fish are equally susceptible to ammonia and some

One of the most dangerous problems in the home aquarium is undoubtedly that of ammonia poisoning

tanks are less crowded, more in balance, and therefore can withstand more

abuse. I find it rather interesting that back in the 60's, household ammonia was recommended as a treatment for skin flukes and gill flukes, and even though cautions were given, it must have been a devastating treatment in the hands of a novice.

The most common reasons for the occurrence of ammonia poisoning are:

1. Newly set up tank in which there are no bacteria to break down

wastes. Proper break-in periods can reduce the risk of death from what is now commonly known as "New Tank Syndrome".

2. Over-feeding a tank, which may or may not be overcrowded (Who's tanks are not overcrowded at one time or another?) This is doubly dangerous after a water change.

3. A large water change in an already established tank, disturbing the gravel bed and/or cleaning filters at the same time. This removes too many nitrifying bacteria and unless you have reduced the fish population at the same time, an ammonia surge is imminent.

4. Making infrequent, irregular water changes, and then trying to compensate by doing too much at once. This method causes an immense swing in the entire balance of the tank and not only can stress the fish by the excess fluctuation of the nitrogen cycle, but of the pH as well. A sudden increase of pH causes temporary multiplication of ammonia.

5. Adding too many new fish to any tank, new or old. Even moving large numbers of fish from tank to tank within a fish room can upset the balance in a tank. Just because you have had the fish a while does not make it immune to indiscriminate changes.

6. Improper handling during transport, coupled with incorrect

continued water changes.



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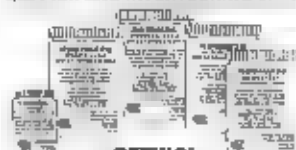
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acclimation. Ammonia builds up quickly in a plastic bag, and transferring the fish from a polluted bag into a tank too quickly can cause stress. Remember all changes should be done carefully and gradually.

7. The use of cleaning compounds and products around or on the aquarium. Even though this should not happen, occasionally it does, and window cleaner contains ammonia. Be careful. Anything not made for use in aquaria should not be used. A little dirty glass is better than dead fish.

Symptoms vary from moderate inactivity to severe distress, including very rapid breathing, redness of the gills, hanging at the water surface, burning of the mucous membranes and sudden death. The fins may become burned to the extent of appearing to melt off the fish. There may be redness at the base of all the fins, equilibrium can be lost and a glazed expression may be apparent. Once the slime covering of the animal is interfered with, he is, of course, left open to any number of bacterial infections. After one or all of these symptoms appear, you may at first wonder what is going on because of the rapidity of the onset. If and when you finally realize it is some sort

of "shock" you of course head for the books to find out how to reverse it. Searching for the answer will lead you on a merry chase, because the topics "shock" and "ammonia poisoning" are not found in book indexes. Not in any of my books, at any rate, and I feel I have a fairly decent home library. When time is the all important factor in reversing the problem you may have already lost the race just by looking for the solution. My methods for reversal of ammonia poisoning are:

1. Do a partial water change of not more than thirty percent. If possible use water from another tank that is in good balance and has approximately the same water conditions. If no such tank is available, use fresh water and increase the amount of chloride remover. Use an ammonia test kit, and make another smaller water change when the ammonia level is above 1 ppm. Make no more than three water changes, the initial large one, a small one five or six hours later if needed and a small one the next morning.

2. Reduce lighting to a minimum. Total darkness is best, however dim light may be necessary for you to work by.

3. Increase aeration, and if

possible filtration. Using an already established sponge filter helps speed up detoxification of the tank.

4. If the aquarium is excessively cloudy or cloudy for a minimum amount of time. Remember you are removing good bacteria along with pollutants.

5. Add products to reduce stress, such as Stress Coat, Polyquid or Novaguard. Several breeders have reported success with the use of a highly concentrated dosage of liquid vitamin B-12. An enzyme tablet such as Tank Safe can be added, but remember it will add to the cloudiness. Do not add more than the recommended amounts. Add an ammonia absorbing resin to the filter. I use Ammonia Sorb. Regular use of such products is a safe guard, but are not a cure all for lack of proper maintenance.

5. DO NOT FEED. Food will only increase the amount of pollutants you are trying to curtail. You can offer small amounts of food only after some clearing and normal activity is resuming. Feed very lightly for the next several days and monitor the ammonia levels.

7. Be patient. Wait it out. It takes a while to get out of this mess. I do not consider the tank back to normal for at least a week. Fish that have been subjected to ammonia poisoning may have some long term damage that cannot be detected by sight alone. I tend to pamper them for several weeks, by doing more than average water changes and not overfeeding them at any one time. "Smaller more frequent" is the rule to follow. If you think about it, that should be the rule at all times anyway.

I hope you never have need for this article, but if you do, I hope it helps.

GLPPY VARIABLES

By: Stephen Kwartler
East Coast Guppy Association
South Jersey Guppy Group

Try for a moment to think what this one little fish really is. Originally when it was first discovered it was only a grayfish or light colored fish with a splash of color. In time some European naturalists started maintaining them in the aquarium when they became aware how easy they reproduced. Then something happened; mutations appeared. Suddenly the hobbyist had a new fish to experiment with like the Japanese had done with their goldfish and koi for centuries. There was now a new kid on the block. Word of this little fish traveled far and fast. Everyone with any interest in the aquarium hobby desired this little fish.

Around the time of World War II there became a number of hobbyists who began devoting much time and effort in the development of the guppy. In Europe many hobbyists were already discovering the many color possibilities hidden in the genetics of this fish. After the war many aquarium clubs started to become very popular all over the United States. The guppy brought much excitement to many a meeting. Breeders all over began an exchange of ideas that would prove to be the beginning of the modern guppy. Soon in the early 1950's, brightly colored guppies with different tail shapes started to appear in local pet shops. I even remember seeing some magnificent guppies as a young boy in the local Woolworth's.

I set up my first fish tank with my dad during the summer of 1954. I was only four years old. I remember going by bus with my mother to the pet shop to buy my first guppies. Those fish were as well as I can remember only slightly better than today's feeders. By the way this pet shop is still in business and still

has the same stainless steel tanks I remember as a small boy of four.

By the time I was eight years old I had at least half a dozen tanks in my bedroom. Most of the fish raised were different varieties of livebearers: guppies, mollies, platies and swordtails. One day when I was in the third grade my friend and I decided to play hockey. As we wandered around the neighborhood we ended up at the local Salvation Army. They had an enormous warehouse loaded with all kinds of toys. We started going through boxes of electric trains. Suddenly we were approached by an elderly man. He told us his name was Otto and he asked us where our

parents were. When he realized we were on our own he began to scold us for not being in school. To teach us a lesson he brought us upstairs to show us where the less fortunate folks lived. As we wandered this long hallway suddenly saw a row of fish tanks. These tanks were so green with algae that at first I could not see any fish. On closer examination I could see there were hundreds if

not thousands of the most unique guppies I had ever seen. There were all types of swordtails, swordtails in every color you could imagine. On the bottom of each tank there were marbles and seashells that the smaller fish used as shelter. Otto saw our enthusiasm and he gathered up some glass jars and netted us both some

of his guppies. When I got home I discarded most of my fish and replaced them with my new "fancy guppies."

My friend went home and pleaded with his parents until they bought him his first fish tank. In time the two of us had too many fish to keep. We started giving them away to anyone in the neighborhood who wanted them. Soon all my friends had guppies, some in tanks others in jars. I never thought I would see better looking guppies until one day when I was about eleven or twelve saw some of the largest and most beautiful guppies even by today's standards. I later found out that these came from a local breeder by the name of Paul Hahnel. Unfortunately I could not afford these guppies.

Over the next few years, guppies became so popular that every aquarium magazine had ads for mail order guppies. Even the local newspapers had ads for guppies. Everyone had or wanted guppies. Over the next few years I tried my hand at breeding angels, bettas and other tropical fish, but I would always return to the guppy. NEXT MONTH: How I met Vic Pileo and Frank Schulerbrandt.



Guppy Roundtable

SOME OF THIS, SOME OF THAT

By PAUL GORDO and SHAN SHUBAL
International Fancy Guppy Association

Question: What is the mated status of females when sold as "trios"? Is the common practice to mate them with the "best" brother of the male that is included in the trio? Are virgins put in the bag? Are they even from the same true-breeding strain? What is the common practice, or is there one.

• **John Calderin**

PAUL GORSKI: Unless you specifically contract with a breeder for "hi" females, you generally receive virgins. You can ask the breeder from who you are acquiring fish that your females be pre-bred by a specific male or just get tank-bred fish. I suggest purchasing "hi" females and disregarding the first litter of young. There is no way to determine if the females are from the same strain or a true breeding strain other than the honesty of the seller. Ask around if possible to determine with whom you want to deal. Unfortunately all of us have been "hed" but hope does spring eternal.

Question: Do they make stands specifically for breeders? Do you have a recommended tank design for breeders?

- Kevin Muir

PAUL GORSKI know of no commercially made tank stands for breeder guppies. Use the top rows of my racks, made of concrete blocks and 2 X 4 lumber to house five gallon tanks for my breeders and also for my young fry. Many years ago there were some iron stands called breeder racks but they were square tanks (twenty to thirty gallons) for breeders of other tropical fish. They maximized tank volume for floor area covered. Angel fish breeders used them for growing out their fry and tried them for guppies. A specific benefit is noted at half time.

Question. Do most guppy breeders add salt to their aquarium water?

— John Caldera

PAUL GORSK The addition of salt to guppy tanks is an age old practice that does have some medicinal value and some breeders believe it helps provide buffering to

the tank (pH control). Experiment and find out what works best for you. I have heard one to three tablespoons per ten gallons suggested as being beneficial.

Question: Do you recommend bare bottom tanks? If so, should any shelter be provided (e.g. floating plants or a small flower pot)?

• **Kevin Moore**

PAUL QORSEK I recommend bare bottom tanks to any and all guppy breeders. We have enough problems in other areas and do not need to worry about what is lurking under that gravel. I know of no breeder that practices a non bare bottom regimen. Many years ago, Ronnie Johnson with the Pan Pacific Guppy Association, did raise some of the best greens I have ever seen in fully planted, under gravel filtered tanks. I never could to slay with bare bottoms. Shelter for females and fry can be provided by "Chove-Girl" plastic scrub pads. Unravel to make a loose floating mass of string. This method has worked for many for years.



Guppy Roundtable

PROTEIN?

By: Willard Snow
Excerpts from *Glacier Gazette*, May 1988

or the past several months, have been wandering almost aimlessly through a vast maze of organic chemical formulas. I has hoped to be able to grasp the meaning of at least some of the basic organic chemistry concerned with nutrition, but am not sure I still know what I knew when I started. One thing I did find out, however, was that "protein" is no a thing, it is a whole damned world of things.

Prior to my wanderings, I had tended to think of protein as a kind of stuff in guppy food - the more of which you fed the fish, the better they would grow. By paying careful attention to television commercials, I discovered that human hair was almost all protein, but somehow I felt that hair just would not be a terrific food for fish.

It did not take too much digging to discover that there are virtually limitless kinds of proteins, some of which are almost useless as food for anything and some of which serve as food for almost everything. To give you some idea of how many specifically different proteins there might be, think about this: a chemist can classify or identify many animals as to specific species simply from the type of protein found in its tissues or blood. Animals that are structurally very similar may be worlds apart in terms of their specific protein makeup. Maybe this is part of the reason why something such as beef heart or baby brine shrimp or chicken

glizzards or worms are so much better as food for guppies than other things of equal protein percentage. Animals differ in terms of the specific protein they are made of and they differ in the specific protein they need in their food.

There are living organisms that can actually live on, or eat if you will, simple elemental chemicals such as iron or sulfur. As the organism becomes more complex it tends to require more complex food forms. For some of the higher animals the specific nutritional essentials have been

It is a very tricky business trying to figure out what the nutritional essentials are for any given animal. One procedure is to supply the animal with a diet of all the known food elements in their simplest form and then omit various ones to see what happens. This gets fouled up by the fact that food elements in just the right proportions must be achieved to avoid growth inhibition, or by the fact that sometimes a missing essential can be inadvertently supplied from other sources. For example, the bacteria in the

animal's digestive tract may be combining some of the simple food elements to make another and if you omit the "other one" from the diet, nothing will happen even though it is nutritive essential.

Basically what goes on through the digestive and metabolic process is that the animal eats food composed of very complex chemical units called proteins. These proteins are chemically broken down into simpler units, amino acids, and used as such or are rearranged to make the specific proteins that animal needs. If the original food does not contain the right stuff or cannot be broken down into the right stuff, then the animal must either get it elsewhere, synthesize it himself, or starve. Apparently, some food sources are much more efficient foods for a given animal. If the given complex protein would break down into just the right ratios of all the required food elements, then we would have the perfect protein source for that animal. Such "perfect protein sources" just do not exist though, and we must settle for what is available.

Proteins are only a fractional part of nutritional requirements of guppies. The need for inorganic ions, minerals and vitamins are just as important and so far just as little understood.

Someday somewhere, someone will compare the chemical structure of beef heart, brine shrimp, and worms and tell us just why those things work so well. Until then, we guppy nuts will probably continue to feed our fish everything that we know works and anything else that is handy.

Proteins are only a fractional part of the nutritional requirements of guinea pigs



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MESSAGE FROM THE PRESIDENT

By Jim Alderson, DVM, President
International Fancy Guppy Association
Pan Pacific Guppy Association

Dear Members,

The show season is off to a good start. There seems to be a lot of new names in the show results. Some of the color classes are not well represented and could be an excellent opportunity for beginners to garner IFGA awards.

One of our biggest hurdles to overcome is making more fish available to guppy breeders. The Clearing House needs many more names and lines of fish for members to acquire adequate stock. The Pan Pacific Guppy Association has been trying to acquire new lines from different breeders without much success. do not know if breeders don't want to give up any fish because they

are afraid of the competition or if they simply do not have enough stock to offer for sale.

If you win a class and no one else competes, what have you really achieved? The emphasis should be on furthering the hobby and the development of the fish and not the trophies.

I still feel as though we are in a transition stage with the bulletin and new officers. There are so many more things that need to be done. It is hard to find the time to do them all at once. The meeting at the annual will be a good time to solidify some of our goals for the next year.

Above all, remember that this is a hobby and even though it requires hard work, it should be fun. I have raised many other tropical fish and no others even come close to being as interesting or as challenging as guppies.

PROPOSED SHOW SCHEDULE

The proposed show schedule for next year to be voted on at the Annual Show hosted by Chicago Associates International of Chicago on November 5-7, 1993 is as follows:

SECOND HALF 1993-1994 SHOW SEASON

HEARTLAND GUPPY CLUB
April 30 - May 1, 1994
GATEWAY GUPPY ASSOCIATES
May 21 - 22, 1994
COLUMBUS OHIO GUPPY SPECIALISTS
June 18 - 19, 1994 or June 25 - 26, 1994

FIRST HALF 1994-1995 SHOW SEASON

EAST COAST GUPPY ASSOCIATION
July 16 - 17, 1994
PAN PACIFIC GUPPY ASSOCIATION
August 6 - 7, 1994
NEW ENGLAND FANCY GUPPY ASSOCIATION
August 27 - 28, 1994
GUPPY ASSOCIATES INTERNATIONAL OF CHICAGO
September 17 - 18, 1994
GUPPY ASSOCIATES OF MILWAUKEE
November 4 - 6, 1994

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DISCLAIMER: All exchanges are strictly between buyer and seller. The International Fancy Guppy Association, Pan Pacific Guppy Association and Guppy Roundtable assume no responsibility for any items sent without proper identification and performance.

Stephen Kwartler, Clearing House/Swap Shop Chairperson

Blues, Greens, Half-Black AOC's, Half-Black Blues, Half-Black Reds, Reds, Variegated Shakeskins

Half-Black Vespers

Blue Shakeskins, Blues, Greens, Half-Black AOC's, Half-Black Blues, Half-Black Pinks, Half-Black Reds, Red Albino, Reds

Blues, Purples, Reds

Half-Black Yellows, Red Albino, Swordtails, Variegated Shakeskins

AOC's (whites), Blues, Emerald Green Swordtails, Half-Black AOC's (lutes variegates), Half-Black Blues, Half-Black Purples (red and variegated), Purple

Greens, Purples, Reds

Greens, Half-Black Pinks

Blues, Half-Black Blues, Half-Black Reds, Reds

Purples



TWENTY-FIFTH ANNIVERSARY
OF
INTERNATIONAL FANCY GUPPY ASSOCIATION

NOVEMBER 5 - 7, 1993

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OFFICIAL INTERNATIONAL FANCY GUPPY ASSOCIATION SHOW RESULTS

COLUMBIA DINO GUPPY ASSOCIATION, ALBANY, NEW YORK, 1983, FULLY BUNDLED EIGHTY-TWO ENTRIES

BEST OF SHOW TANK

(FOURTEEN ENTRIES)

FIRST PLACE GARY MOUSSEAU Red	SECOND PLACE GARY MOUSSEAU Half-Black Yellow	THIRD PLACE JOHN WOLFF Half-Black Yellow	FOURTH PLACE IMPELIS Black
-------------------------------------	--	--	----------------------------------

BEST OF SHOW MALE DELTA

(FOURTEEN ENTRIES)

FIRST PLACE GARY MOUSSEAU Red	SECOND PLACE JOHN WOLFF Half-Black Yellow	THIRD PLACE JOHN WOLFF Half-Black Yellow	FOURTH PLACE GARY MOUSSEAU Half-Black Yellow
-------------------------------------	---	--	--

BEST OF SHOW MALE SWORD/VEIL TAIL

(FOURTEEN ENTRIES)

FIRST PLACE GARY MOUSSEAU Sword Veil	SECOND PLACE JOHN WOLFF Sword Veil	THIRD PLACE JOHN WOLFF Sword Veil	FOURTH PLACE GARY MOUSSEAU Sword Veil
--	--	---	---

BEST OF SHOW FEMALE

(FOURTEEN ENTRIES)

FIRST PLACE MICHAEL Black	SECOND PLACE JOHN WOLFF Half-Black Yellow	THIRD PLACE JOHN WOLFF Half-Black Yellow	FOURTH PLACE IMPELIS Black
---------------------------------	---	--	----------------------------------

BEST OF MALE

(FOURTEEN ENTRIES)

FIRST PLACE GARY MOUSSEAU Red	SECOND PLACE JOHN WOLFF Half-Black Yellow	THIRD PLACE JOHN WOLFF Half-Black Yellow	FOURTH PLACE IMPELIS Black
-------------------------------------	---	--	----------------------------------

BEST OF FEMALE

(FOURTEEN ENTRIES)

FIRST PLACE MICHAEL Black	SECOND PLACE JOHN WOLFF Half-Black Yellow	THIRD PLACE JOHN WOLFF Half-Black Yellow	FOURTH PLACE IMPELIS Black
---------------------------------	---	--	----------------------------------

JUNIOR DELTA

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

JUNIOR TANK

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

JUNIOR FEMALE

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

NOVICE DELTA

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

NOVICE TANK

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

NOVICE FEMALE

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

VEIL 43 ANNUAL

MOON/EYE COLOR (FOURTEEN ENTRIES)	HALF-BLACK (FOURTEEN ENTRIES)	SNARESKIN (FOURTEEN ENTRIES)	SOLID CAUDAL (FOURTEEN ENTRIES)	VARIATED CAUDAL (FOURTEEN ENTRIES)
1. Gary Moosau	1. Gary Moosau	1. Gary Moosau	1. Gary Moosau	1. Gary Moosau
2. Gary Moosau	2. Gary Moosau	2. Gary Moosau	2. Gary Moosau	2. Gary Moosau
3. Gary Moosau	3. Gary Moosau	3. Gary Moosau	3. Gary Moosau	3. Gary Moosau
4. Gary Moosau	4. Gary Moosau	4. Gary Moosau	4. Gary Moosau	4. Gary Moosau

FEMALE GLASSER

ALBINO FEMALE (FOURTEEN ENTRIES)	AOC FEMALE (FOURTEEN ENTRIES)	BLACK FEMALE (FOURTEEN ENTRIES)	BLUEGREEN FEMALE (FOURTEEN ENTRIES)	BRONZE FEMALE (FOURTEEN ENTRIES)
1. Gary Moosau	1. Gary Moosau	1. Gary Moosau	1. Gary Moosau	1. Gary Moosau
2. Gary Moosau	2. Gary Moosau	2. Gary Moosau	2. Gary Moosau	2. Gary Moosau
3. Gary Moosau	3. Gary Moosau	3. Gary Moosau	3. Gary Moosau	3. Gary Moosau
4. Gary Moosau	4. Gary Moosau	4. Gary Moosau	4. Gary Moosau	4. Gary Moosau

JUDGING

Tank: Gary Moosau, Delta: Gary Moosau, Veil: Gary Moosau, Sword: Gary Moosau, Female: Gary Moosau, Junior: Gary Moosau, Novice: Gary Moosau, Best of Show: Gary Moosau

OBSERVING

Bob Moosau, Gary Moosau, Gary Moosau, Gary Moosau, Gary Moosau, Gary Moosau, Gary Moosau, Gary Moosau, Gary Moosau, Gary Moosau

ALBINO DELTA

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

AOC BICOLOR DELTA

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

BLUE DELTA

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

BRONZE DELTA

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

GREEN DELTA

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

H-B BLUE DELTA

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

H-B PURPLE DELTA

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

H-B YELLOW DELTA

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

PURPLE DELTA

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

RED BICOLOR DELTA

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

SNARE VARIEGATED

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

SWORDTAIL SINGLE

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

ALBINO TANK

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

AOC BICOLOR TANK

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

BLUE TANK

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

BRONZE TANK

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

GREEN TANK

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

H-B BLUE TANK

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

H-B PURPLE TANK

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

H-B YELLOW TANK

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

PURPLE TANK

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

RED BICOLOR TANK

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

SNARE VARIEGATED TANK

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

SWORDTAIL TANK

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

AOC DELTA

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

BLACK DELTA

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

BLUEGREEN BI DELTA

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

GOLD DELTA

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

H-B AOC DELTA

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

H-B PASTEL DELTA

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

H-B RED DELTA

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

MULTI DELTA

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

RED DELTA

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

RED TANK

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

SNARE SOLID DELTA

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

SWORDTAIL DOUBLE

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

YELLOW DELTA

(SEVEN ENTRIES)

1. Gary Moosau
2. Gary Moosau
3. Gary Moosau
4. Gary Moosau

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1004 East Avenue, Lubbock, Texas

PAN PACIFIC GUPPY ASSOCIATION IS AGGRESSIVELY SEARCHING FOR NEW MEMBERS

By: Derrisa Tall
Pan Pacific Guppy Association
Newsletter Editor/Publisher

The continued goal of the Pan Pacific Guppy Association is to significantly expand the membership of our organization which now boasts over sixty guppy enthusiasts. We would appreciate thoughtful ideas, proposals and suggestions from club members regarding measures that should be utilized to accomplish our lofty goals.

Although *Guppy Roundtable* was recently designated the official monthly publication of the International Fancy Guppy Association the Pan Pacific Guppy Association has retained publication credit for the newsletter. Therefore, now we rely even more on the creative input from members of the Pan Pacific Guppy Association. Your experiences (humorous and serious), information, knowledge and artistic talents are of paramount

importance if we are to maintain the reputable quality of our publication. Your articles and cartoons will enable our newsletter to be more informative and interesting for all breeders of fancy guppies, whether advanced or novice. *Guppy Roundtable* is the most effective forum for breeders to promote the enjoyment and knowledge of our little friend, the guppy.

This is YOUR publication and its continued growth and success hinges on your support. You do not need to be a perfect writer; that is why there are editors. The Newsletter Editor/Publisher will gladly make the necessary corrections to your article prior to publication.

Club member's ideas on how to improve the design, format, layout or quality of *Guppy Roundtable* are not only eagerly welcomed but greatly appreciated. Do not be shy about sharing your creative talents with the publication staff.

Make your Newsletter Editor/Publisher happy and write an article for publication in *Guppy Roundtable*.

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DONATIONS NEEDED

All club members, yes that means you, are readily encouraged to solicit product donations from mail order warehouses, pet stores or tropical fish stores you frequent for the FIRST ANNUAL ALL SPECIES AUCTION hosted by the Pan Pacific Guppy Association on Sunday, October 10, 1993.

Each contributor of an aquatic related product donation valued at ten dollars or more is entitled to a one month business card sized complimentary advertisement in *Guppy Roundtable*, the new official monthly publication of the International Fancy Guppy Association. Product donations valued under ten dollars will be entitled to a one month complimentary "strip ad".

The club member soliciting the product donation will receive one point per donation towards the annual "Member of the Year" award with a Grand Prize of airfare to next year's IFGA Annual Show. Contribute to the success of the Pan Pacific Guppy Association's FIRST ANNUAL ALL SPECIES AUCTION with aggressive donation solicitations and win a trip to the Annual!

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Pan Pacific Guppy Association MEETING SCHEDULE

OCTOBER 10, 1993 - 2:00PM
ANNUAL ALL SPECIES AUCTION
West Covina Lanes
Banquet Rooms
675 South Glendora Avenue
West Covina, California
818 960-3636

DECEMBER 12, 1993 - 5:00PM
ANNUAL POTLUCK DINNER
David Wexler's Residence
11497 Biona Drive
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310 390-4718

Pan Pacific Guppy Association

HOSTS

FIRST ANNUAL ALL SPECIES AUCTION

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First Annual, All Species Auction, on October 10, 1993 located at

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818 960-3636

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2:00 - 4:00 PM MEETING OF THE PAN PACIFIC GUPPY ASSOCIATION

4:00 - 5:00 PM INSPECTION OF AUCTION ITEMS

5:00 - 6:00 PM GIANT AUCTION OF FISH AND EQUIPMENT

For further information please contact: Jim Alderson 903 584-4233, Dennis Brown 310 558-0946, Mike Khalil 818 892-2456

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GUPPY ROUNDTABLE

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INTERNATIONAL FANCY GUPPY ASSOCIATION

VOLUME 1 ISSUE V

PUBLISHED BY THE PAN PACIFIC GUPPY ASSOCIATION

NOVEMBER 1983

*A new
beginning
for an
old tradition:
The
reemergence
of the
Anniversary
Issue*



The International Fancy Guppy Association was formed twenty-five years ago to standardize the exhibition of guppies, training and qualifying judges, establishing a bowl show schedule, and updating standards. Special emphasis was placed on promoting interest, knowledge, recreation and understanding through discussion and exhibition of our challenging little friend, the fancy guppy.

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FOLLOW
THE BEST GENETICS

By Jim Alderson, D.V.M., President
International Fancy Guppy Association
Pan Pacific Guppy Association

Last month I described how raise the young until the first two or three months of age. It may take you a couple of generations to master raising the fish to ninety percent of their potential. Good feeding and watching the water quality will usually result in vigorous growth. You will soon begin to learn the traits of your particular line.

Each line of guppies has its own genetically determined make-up. You will soon learn many of the traits of your particular line of fish. Many breeders will develop a mental picture of the fish they would like to see swimming in their tanks. While this may be your ultimate genetic goal with your fish, it is many times not practical. You sometimes have to follow the genetic drift of your strain.

have had to change my plans countless numbers of times because crosses or lines did not produce what I had expected.

At one time I had a fifty-five gallon tank that I put all my culs in. A good guppy breeder by the name of A. Garfield came by the house and looked at the fish in the tank and told me my best breeder was in my pull tank. It was a large blue with a large caudal and a small dorsal fin.

I argued that the fish did not come close to the International Fancy Guppy Association standards. He went on to explain that the fish was twice as large as my other blues and was very vigorous. He felt that some of the offspring in the next generation or two would develop a respectable dorsal fin and retain the size and color of the superior individual. I bred that fish and he was right. One year later



Half-Black Red Veil
Photograph courtesy of David Wheeler

my blues were competing for best of show in New York at the annual

If you continually breed the same line, you will end up with small, weak well formed guppies. You must occasionally breed the more active larger fish that has some faults to keep up the viability of the line. Recently one of the largest best formed males in the batch had a very pale white and black pattern in his caudal fin. I crossed him to two non-sibling females from the same line. The results were some of the nicest Blue/Green bicolors I have ever raised. Most of my best new lines are produced by breeding the quality fish and seeing what happens. This is why one year I may have good AOC Bicolors and Half-Black AOCs the next I fill my tank space in the best young fish.

If a line is not progressing well, outcross them and then backcross to the parent line. This process may take eight to twelve months. Unfortunately, I may miss a season with that line, but when it comes back it will be with better fish.



Half-Black AOC Gella
Photograph courtesy of David Wheeler

GUPPY ROUNDTABLE

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BACTERIAL INFECTIONS IN FISH

Understanding one of the most common causes of disease in fish

By Dr. Beverly A. Olson
Microbiologist

As every hobbyist knows, bacterial infections can be a serious problem when keeping tropical fish. But bacterial disease is not limited to hobbyists' tanks. It is present from the fish farm up through the wholesale and retail levels as well. Recent estimates suggest that as much as ten percent of the money spent in the hobby goes to dealing with disease problems.

It is difficult to determine just how many of the diseases are actually bacterial because mixed infections of both bacteria and parasites are usually present. To complicate the problem further bacterial infections often go undiagnosed or misdiagnosed because the laboratory techniques used to identify bacteria accurately are not readily available to the hobbyist or the aquarium fish industry for that matter. Bacterial isolation and identification require a working knowledge of techniques in microbiology, a variety of growth media and numerous test reagents. Identification can be quite costly if done by a veterinarian or microbiology lab.

Over the years, many bacterial pathogens have been identified. Of these, the most important in freshwater aquarium fish is a bacterium named *Aeromonas*. Both as a primary infection in wounds or as a secondary problem as the result of stresses, such as rapid temperature changes, handling, poor water quality or parasites, *Aeromonas* has emerged as the most prevalent bacterial pathogen.

Most hobbyists do not realize that there are several types (species) of *Aeromonas*, all of which can cause infection in aquarium fish. In a recent study funded by the Western World Pet Supplies Association, our laboratory identified three different species of *Aeromonas* present in kidney and wound samples from fish imported from Singapore fish farms. Each species was able to cause infection, and often two species could be isolated from the same sample.

Of the species of *Aeromonas*, the one most familiar to the hobbyist is *Aeromonas hydrophila*. There are many names for the infection produced by this bacterium, ranging from the scientific version known as hemorrhagic septicemia, to the layman's versions, called dropsy and redsore. These names describe

the main features of an infection that can take at least three physical forms. One of the most obvious is the external hemorrhagic ulcer. These open wounds appear as localized ulcers on the body of the fish, often with areas of dead tissue and sloughing scales. Hemorrhages also may appear at the base of the fins. Some researchers postulate that *Gyrodactylus* (body flukes) may act as carriers for the bacteria, which then enter the wounds made by the flukes. These bacteria produce substances that allow them to adhere to the surfaces of cells. Other types of abrasions or tissue damage may also play a role in establishing infection.

Another easily identifiable form of the disease is dropsy. This condition, in which the abdomen fills with fluid and appears swollen, is due to an internal bacterial infection in the kidney, liver or intestinal tract. The resulting disruption of normal circulation of blood and other fluids causes a backup in the system. The fluids accumulate in the intestine and abdominal cavity, resulting in the distention of the abdomen. In severe cases, the scales may stand out from the body, displaying the condition often called pinecone disease. Sometimes the eyes may appear to bulge, known in scientific terms as exophthalmia. This type of infection does occur often in tropical fish but seems to be more commonly associated with goldfish.

The third type of infection produced by *Aeromonas* is by no means the least. This form is often the most virulent (potent) and can be rapidly fatal. This insidious form does not produce any noticeable external ulcers. The most notable feature is a behavioral change in which the infected fish generally become listless and lethargic. Some fish may lose color or appear darker. The fish do not feed, frequently swim off balance and may sink to the bottom, laying on their sides. The course of the disease is rapid, and by the time the behavioral changes are noticed, the entire

(continued on page five)

an internal infection, with the bacteria being found in the kidneys and blood of these fish. The bacteria produce potent toxins that account for the severity of the disease.

There is a fourth species of *Aeromonas* that is also responsible for disease in ornamental fish. This bacterium, known as *Aeromonas salmonicida*, causes what is referred to as goldfish ulcer disease or GUD. This bacterium has long been a scourge in salmon and trout, causing the disease of furunculosis. In salmonid fish, the acute form of this disease commonly appears in growing fish and adults. The classic features of furunculosis include darkening of the body, lethargy and hemorrhages at the base of the fins. The infection gets its name from the typical development

of swellings on the body surface, which rupture to release a bloody fluid. This surface ulcer is the furuncle. Affected fish usually die within two or three days.

In goldfish and carp, the infection is produced by an atypical, or what is known as an aberrant, salmonicide. This disease, recognized in European carp culture over a century ago, was given the name *Carp Erythrodermatitis* and was thought to be part of the disease process of "carp drop syndrome." It was not until as recently as thirty years ago that this syndrome was found to be comprised of two diseases, one produced by a virus and the other produced by the aberrant bacteria from salmonids. The disease is now known to infect members of the carp family, including goldfish and koi, and several different

varieties of bass and sunfish. The classic feature of GUD in goldfish is the development of a large circular, very swollen hemorrhagic ulcer, generally occurring on the sides of the fish. Infected fish are depressed and lethargic, lose their appetite and become darker in color. The ulcer gradually develops a center of dead tissue that is very susceptible to secondary fungal infection. The outcome of this disease is variable and depends on the immune response of the infected fish. Complete healing of the ulcer can occur, resulting in an extensive, darkly pigmented scar. In other cases, the disease becomes systemic, resulting in the death of the fish.

Although considered to be freshwater bacteria, *Aeromonas*

(continued on page five)

COLUMNARIS DISEASE

Columnaris disease is known by many common names that describe its external appearance. Terms such as cottonmouth, fin rot, mouth fungus and saddle back are all used to describe the forms that this infection may take. The disease is actually caused by the bacterium named *Flexibacter columnaris* and not a fungus, as the common names imply. This bacterial infection was first identified almost seventy years ago in fish from the Mississippi River. Since that time, columnaris infections have been described in both freshwater and marine species from around the world.

The bacterium *Flexibacter* is a long, slender rod-shaped organism that moves with a gliding motion. Under microscopic examination, these bacteria are very motile, gliding rapidly across the field and can be identified readily by their characteristic movement. When large numbers of the bacteria are present, they tend to stack up, forming a characteristic haystack that is easily recognizable

even by the untrained observer. These haystacks are found on fish at the tips of infected gill and fin tissue or on the body itself.

As in other bacterial infections, columnaris disease is frequently associated with stress conditions. Factors such as high water temperatures, crowding and poor environmental conditions can predispose fish to infection. External injury, particularly in smooth-skinned catfish such as *Synodontis*, can make fish very susceptible to infection. Once established, this disease can be highly communicable, causing severe outbreaks that are often associated with high mortalities among young fish.

The physical presence of columnaris disease is expressed by a variety of external signs that are related to the varying virulence or ability to cause disease among different strains. In the case of saddle back disease, the infection begins on the dorsal (top) surface of the fish and rapidly progresses down and around the body, resulting in what looks like a saddle around the middle of the fish. The bacteria have a yellow

color that can give the fish a patchy, yellowish appearance. These bacteria are also noted for their ability to produce enzymes that can erode the skin completely, exposing the underlying musculature. Less virulent bacteria may produce localized shallow ulcers. Gill tissue is a common site of infection and may be in some cases, the only affected area. Damage to the gills is generally associated with brownish dead patches of tissue that are readily invaded by opportunistic fungi, such as *Saprolegnia*.

Columnaris disease is not just a problem in tropical fish. A coldwater form called peduncle disease predominantly infects young salmonids. The bacterium responsible for this disease is *Cytophaga psychrophila*. This bacterium is quite similar to *Flexibacter*. It also is a long, flexible rod that moves with a gliding motion. Many other similarities are present, but the major difference is that peduncle disease usually does not occur in water temperatures above thirteen degrees Celsius (fifty-five degrees Fahrenheit).

Although considered to be freshwater bacteria, *Aeromonas* can live in saltwater and infect marine and estuarine fish. A recently completed survey has identified *Aeromonas* existing in a wide range of salinities except hypersaline waters, such as the Great Salt Lake. The results from this survey also showed that some saline habitats actually had a much higher density of *Aeromonas* than did freshwater habitats. This new information indicates that this organism can occur naturally in marine systems that interface with freshwater.

Despite these findings, the primary bacterial pathogen of marine fish is considered to be *Vibrio*. *Vibrio* is to marine fish what *Aeromonas* is to freshwater fish, and many parasites exist between these two diseases. For example, several species of both can produce disease, stress plays a critical role in initiation of infection, and both



Coliforms, bacteria form small heaps at the edges of fine sand scales. Bright field photograph courtesy of Dieter Jungblut.

bacteria can produce either external ulcers or internal infections (septicemia). Many of the clinical signs are also similar. As in infection with *Aeromonas*, fish infected with *Vibrio* show bloody lesions on their surface. Some may have exophthalmia, hemorrhages at the base of the fins and a fluid-filled abdomen. The darkened color and behavioral changes associated with *Aeromonas* infection are also present.

Vibriosis has become an increasingly important problem with the increase in the mariculture (marine fish farm) industry. Over the past decade not only are more species of fish being bred and raised in intensive culture, but invertebrates as well. Bass, flounders and soles have been introduced to mariculture. Shellfish including lobster, mussel, oyster, shrimp, and abalone are farmed worldwide.

Unfortunately, the problems encountered in culture, such as poor water quality, nutritional deficiencies and crowding, have led to stress-induced *Vibrio* infections, resulting in heavy economic losses for some of these species. Shrimp, for example, are susceptible to an infection in which the bacteria produce a chemical compound or enzyme that can dissolve the external shell. This condition leads either to the death of the infected animal or an unsightly, unsalable product.

Aeromonas and *Vibrio* are probably the most familiar bacteria known to hobbyists. Certainly they are the most common bacterial pathogens in aquarium fish. However, nearly two dozen other bacteria have been identified from infections in tropical fish. Some of these bacteria are uncommon and, unfortunately, their significance as potential problems to aquarium fish is unknown. Others infect a particular group of fish. For example, *Ranibacterium* causes bacterial kidney disease only in salmonids. What is known for certain is that bacterial problems for the most part are stress related, and the outcome of an encounter with bacteria depends upon the status of the immune response of the disease infected fish. Factors such as aeration, nutrition, water quality and many others directly influence whether the fish or the bacteria will ultimately win the battle.

Single colonies of bacterium. Phase contrast photograph courtesy of Dieter Jungblut.

RECEIVING YOUR FIRST TRIO OF GUPPIES

By: Bryan Chin
Pan Pacific Guppy Association

It is exciting when you receive your trio of guppies. You have anticipation of having a tank full of show guppies and winning with them. To do this it takes special care in its environment, feeding and breeding techniques. I will emphasize on what to do to get you on the right track in breeding your new trio of guppies. This will give you the best chance for success.

To have the best possible start you should plan to start with five tanks available for the next three months and then eventually expand to a total of nine tanks. This is to accommodate the different combinations that might occur. By labeling each female "A" and "B" the combinations are as follows:

1. Female "A" was pre-bred by a different male than was sent to you (Combination One)
2. Female "B" was pre-bred by a different male than was sent to you (Combination Two)
3. Female "A" will be eventually bred by the male sent to you (Combination Three)
4. Female "B" will be eventually bred by the male sent to you (Combination Four)

Each of these combinations will take a separate tank to raise each combination separately. The fifth tank is used as your breeding tank. If your females are pre-bred it may take until the third drop of babies to reassure that the breeding by the male sent to you has taken over. You will eventually need tanks to separate the male and females. You must keep track what females are sisters to which males. This is why you need another four tanks to keep the females separate from each

other and to keep the males separate from each other according to their combination number.

Within the next one to three months you will notice that one combination will be better than the other. The first sign is growth rate and vigor. You can usually see this during the first month. By the third month you will notice color, shape and size in the male guppies. The combination that shows the best males will also indicate that their sisters are probably the best females to use. It is interesting to note that the females that show the brightest colors, finnage and size do not always indicate the quality of males they will produce. (Please see my article on choosing the right female which appeared in the October

1993 issue of *Guppy Roundtable*). This is why it is important to keep track of which females go with their brothers. At this point you will decide what combination you will keep. By choosing the best combination you will increase your odds to obtain a consistent high quality strain of guppies.

When choosing your best combination you might want to keep more than one. For example, one combination may show good size while the other may show better color. Many people will keep two related strains that have different feature emphasis to cross for showing or eventually combine together to get the best from each strain and then separate again to two separate strains. Keeping related strains to backcross and a number of generations help maintain vigor and the desired features.

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BACK TO BASICS

By Paul J. Gorski, Judging Board Chairman
International Fancy Guppy Association
Greater Virginia Guppy Association

As most of you know, the Gorski family moved again this year following Diana's career path. This provided the opportunity to set up another fish room and incorporate some of the lessons learned during the past three years. When we last moved, I expanded from about ninety tanks to over one hundred forty. What I found was that I was giving the larger number of tanks the same work commitment I had programmed for the lesser. This does not work. Facility expansion must be accompanied by an increased work time commitment.

Another change I made was the conversion to sponge filters in all my tanks, young and old. I did this even after the Michigan mentor advised against the move. I have since returned to box filters and floss in all but the discus tanks. I found that I needed to visually control the filtration and that there is no sure fire method to sterilize the sponges. Squeezing under running water does clean them, but does not keep from passing or retaining pathogens. Clorox will do the trick, but it also breaks down the sponge and makes it useless.

I have also resumed a split-day lighting procedure during week days. Since I cannot be home to feed at lunch anymore, I put the fish back to sleep after the AM feeding

and have the lights (by timer) come back on about four o'clock in the afternoon. The fish get their only dry food at this time. Both AM and PM feedings are newly hatched brine shrimp. I found that these three good feedings a day works for me. These feedings are by necessity heavy ones, and will take some practice to get them right.

During my more successful years, I always had snails in my raising tanks and water sprites in the breeder set ups. I am also returning to this practice. Catfish were also kept in most tanks. I also practiced a preventative technique when changing water which I did weekly without fail. I would add two-to-four drops of Quick Cure, which is a formaldehyde/malachite green product, to each ten gallon tank.

(continued on page nine; column three)

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BEGINNER GUPPIES - INITIAL CONSIDERATIONS

PART TWO

By Bruce Jung
Pan Pacific Guppy Association
Advertising Director

Now that you have committed space for some guppies, suggestions as to which guppies to choose would be in order. The best advice before choosing your guppies is to attend an International Fancy Guppy Association sanctioned show to see the best varieties of show quality fish. Every color and combination can practically be represented at any given show. With twenty body color groups and four tail shapes recognized by the IFGA, there has to be at least one class for you. If a show is not at all possible, the next best thing is a club member's tanks, especially the ones with large fish rooms. There is little comparison to walking into a room devoted to fish and seeing a myriad of living color swimming before your eyes.

At last month's meeting of the Pan Pacific Guppy Association, our club talked about picking some "easy" guppies for beginners to raise. When beginners say "easy" I take it to mean guppies that are relatively easy to rear, grow and breed. Some of the guppies with the nicest FGA standards are the solid deltas (blues, greens, purples and reds). Through years of selective breeding and culling, these fish are very consistent

producers. If beginners could see a tank of reds, they would know what I am talking about. Briefly, all the fish have the same high quality color, deportment and finnage (quite an impressive display). On the reds, I always notice the highly desirable clean edge on the caudals (the big tail on the end of the fish). These fish types will be of show quality, but they will not likely lead to a class championship because of the stiff competition of experienced breeders with large breeding programs.

Some other "easy" fish are the hybrids: AOC Bicolor, Blue/Green Bicolor and Half-Black AOC. These fish are "easy" because of their mixed parental background. Keeping the genetics simple, a guppy produced from parents of different strains has hybrid vigor. This fish hopefully receives the best traits of both parents, or gets something from one parent that the other one was lacking. These hybrids are generally more vigorous, productive and disease-resistant than their parents. Read some of Jim Alderson's previous articles in Guppy Roundtable for some ideas. The challenge with these fish is trying to fix the show quality traits. Breeding techniques (topic for a more distant article) will fix some of the most desirable traits.

Before you actually bring home your guppies, you need to set up their new home. Making the least stressful transition for your new fish

is your goal. Set up and run your tank for a couple of days to check for leaks and to allow for the chlorine to dissipate. For filtration most breeders use box filters with floss or sponge filters. A filter from a disease free tank can provide a starting culture of nitrifying bacteria; this will provide the biological filtration needed to prevent new tank syndrome. For the most part the filter should mainly provide mechanical filtration. Plenty of nitrifying bacteria will establish on the aquarium sides to provide biological filtration. You should run your aquarium at least in the upper seventy's, if you can not maintain this temperature put in a heater. Putting fish in warm water is less stressful than putting them in colder water. If you carefully prepare the guppies new home and make their transition as stress free as possible they will readily adapt.

Beauty is in the eye of the beholder so go ahead and pick a beauty you would initially like to start to raise. Everyone must start from somewhere and raising something you like should take high priority. Be warned though, the strain you pick will probably be the most difficult one that you could possibly raise. This is not because the fish are weak, but rather that you are a beginner and will make mistakes. A big mistake would be to dump your new fish into an unprepared new tank of water. Make their transition into their home as stress free as possible. Do not be discouraged though because almost any member in your club can suggest some remedies for your problems.

BACK TO BASICS

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had far fewer health problems then, and I am resuming this practice now.

The Greater Virginia Guppy Association has tried just about every food sold to man, and I have fed it all to my fish. I do not know the why's or how's, but I do know what works. Some

foods just do not work for me. One food will cause my females to just start rolling - dying for no apparent reason, while not affecting the males at all. Another food, like this time and worn to by other breeders, just will not be consumed. The bottom of the tanks is just covered with uneaten food. With this in mind, wonder if there is not a common thread to be food transmitted? Most foods have some fish meal and couldn't

the cause of the disease be transmitted by contaminated source material?

On balance, I am returning to tried and true methods and procedures, and repeating to myself the old adage, "Never Quit a Winner." Remember that bigger is not always better and more does not mean greater success. Do what you do well, and your fish will speak for your methods.

HOW TO ORGANIZE A PROFITABLE AUCTION FOR AN AQUARIUM SOCIETY

By Laurie Hesse
The Greater Seattle Aquarium Society

Auctions can be a great deal of fun if the behind-the-scenes action is set in motion and much is completed several months in advance. The success of an auction can provide more than adequate funding for the next year's activities and dreams. The Greater Seattle Aquarium Society has evolved a means for carrying out an auction that is efficient and a pleasure to run. I hope to share some tips and hints from our experiences that may help other clubs plan future auctions.

The Number One priority for any auction is to acquire a list of addresses of manufacturers and distributors who might provide donations of aquarium equipment and supplies for the auction. This list will be the foundation for the auction. If your club does not have a ready-made list, then suggest looking through several aquarium magazines to locate the addresses of manufacturers. After

you have established a list then formulate a donations request letter soliciting these manufacturers for donations to your club. The letter should include a brief description of your club, its activities, and the intended use(s) for the auction proceeds. It is wise to solicit donations several months ahead of time as donations tend to arrive over a period of several weeks. As items are received for an auction, a list of the donors is kept so that thank-you letters can be sent.

The above list should be updated every year. It is also helpful if the maintenance of the list is the duty of one person. Maintaining this list in a computer file is nice, but not essential, as long as the list is kept current. Local donations from members, retailers, and wholesalers are of great value as these items are usually the types that cannot or are not usually shipped by



Half-Black ADB Delft
Photograph courtesy of David Winkler

manufacturers (live fish, live plants, or tanks, for example).

Members should volunteer to solicit from those retailers and wholesalers with whom they are most familiar. Donations are solicited several days to one month in advance of the auction. When live fish are donated it is the soliciting member's responsibility to pick up those fish on the day of the auction and to bring them to the auction site. A list of the items, donors and items donated is formulated at the auction so that thank-you letters listing the items donated can be sent.

Advertisement is very important and the key to a successful auction. We print a flyer and distribute copies of this to local pet stores and mail it to members and others on our mailing list. Our biggest draw seems to be from advertising in the local daily newspaper (especially the Sunday edition) under the classifieds-pet section. We list a member's phone number and usually receive many phone calls from interested people.

Before the actual event the auction coordinator should

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Half-Black Paster Delft
Photograph courtesy of David Winkler

assign the following items to be brought to the auction:

Refreshments: Cookies, juices, sodas, coffee and tea are greatly appreciated.

Supplies: Waterproof marking pens, adhesive (removable) labels, extra plastic fish bags and rubber bands, and paper grocery bags are all considered essential. The paper or plastic bags are also used to make "grab bags" of small items (books, foods, conditioners) for auction.

Literature from Manufacturers:

This is included in many of the packages of donated supplies and equipment that we receive. We display the literature on a table so that auction participants can pick it up.

New Member Kits:

This is our way to promote new membership. We put together kits that include donated items such as copies of aquarium magazines, samples of fish food, water conditioners, or other supplies, and the latest issue of our annual publication. These kits are given to people who become members at the auction.

Bid Numbers:

Each bidder signs in at the registration table. A 3" x 5" card with the number that corresponds to the item in the registration book that the bidder signed on is then given to the bidder, and all items that the person bids for and receives are recorded under this number.

Before the actual event, the auction coordinator should also assign the following jobs to be performed by various energetic club members throughout the auction.

Setup & Take Down Crew:

These people set up chairs and tables, arrange auction items (and manufacturers' literature) for viewing, and help clean up after the event.

Fish Identifier: This person labels all fish brought into the auction for quick identification during the proceedings. If the bidders are unfamiliar with a fish, the fish identifier gives a brief description of the fish and its care.

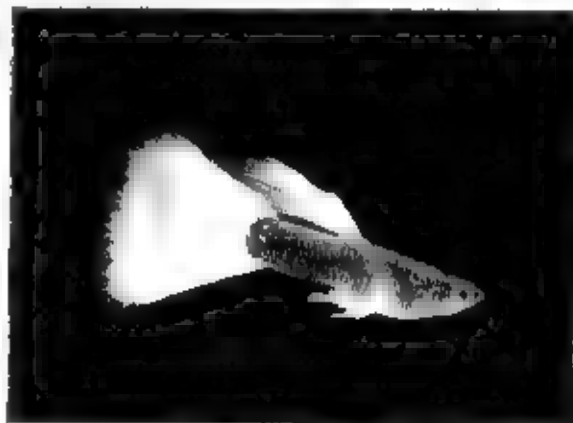
Auctioneers: More than one club member may be needed for this job, as auction-associated

itemizer. When an item is sold to a bidder, his or her number is recorded on that item by the itemizer to ensure proper owner identity. Waterproof marking pens and removable adhesive labels are used for this task.

Recorder: The function of this person is to generate a master list of all items sold, including the price of each, and the identification number of the successful bidder. This master list is generated for quick review and accurate bookkeeping. The list is then transcribed by assistants into individual records for each bidder.

Recorder Assistants:

These two to three people keep individual account records on separate sheets of paper (organized by bidder numbers) in notebooks. They sit on either side of the recorder and transcribe the information taken by the recorder into the individual accounts. (Each assistant has the responsibility for a particular block of bidder numbers.) When a bidder is



Half-Black Yellow Velt
Photograph courtesy of David Winkler

finished bidding, he or she picks up the appropriate account slip and takes this to the cashier to pay the bill.

Cashier: This usually is the club treasurer. All items on the account slip are screened by the bidder to ensure accuracy, then their prices are added up and the bidder pays for the purchased items. The cashier initials the slip and marks "paid" on it. After the bill is paid, the purchaser can then take the paper to the holding area to pick up his or her items.

Runners: Some runners take items from the display tables to

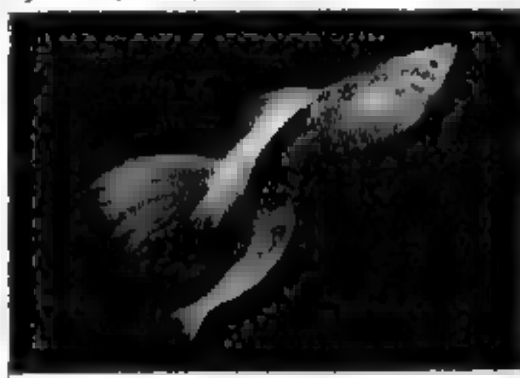
(continued on page twelve)

the auctioneer for sale. Other runners take items that have been sold (and tagged by the Remizer) to the holding area.

Holding Area Organizers: The holding area needs to be fairly

near the auctioneers. The items that have been sold are brought by the runners to the holding area organizers. All items are placed in the appropriate paper grocery bags, which have been labeled with individual bidder numbers and are arranged by bidder number. After a bidder has paid for his or her items, he or she presents a "paid" slip to the people in the holding area and the items purchased are released.

We have the treasurer all in an easily accessible and visible place so that new members can sign up and receive new membership packages. Before the auction starts, the president gives a synopsis of what this



AOC Delta
Photograph courtesy of David Wester

Now that you have seen the integral pieces of the auction, here is how the auction looks to both members and bidders. For members, the auction starts months in advance as the date place.

and time are set. National solicitation is begun. One month before the auction, support is generated from potential local donors, flyers are sent to members and distributed to pet stores, and an ad is placed in the local newspaper for best audience penetration. (We remember to include a telephone number in the ad because many people do have questions about the auction.)

At a club meeting before the "Big Event" (auction), jobs are assigned as outlined above. We give ourselves a minimum of a good hour prior to the auction start time for setting up. We organize display tables of the items for purchase.

particular club does during the year, and an explanation of the bidding procedure and check-out procedure. An announcement is also made about the membership



Mull Delta
Photograph courtesy of David Wester

packages for anyone who joins the club at this time.

As a potential buyer, the first thing I do is sign in at the registration book: name, address and telephone number or a numbered line. I then pick up the card with the number that

corresponds to my name. As items are brought forth from the display tables and given to the Auctioneer by Runners, I hold my card up for those that interest me. If at any time the price is too high, I simply lower my card and am no longer a potential buyer for that particular item. If I am the final bidder (buyer), I am asked to keep my card up while the Remizer writes my number on the purchase, and the Recorder writes down the item, price and my bidder number. A Recorder Assistant writes my purchased item description and price in a notebook under my bid number.

A Runner takes the marked item to the holding area where it is carefully placed in a bag with that number on it by a Holding Area Organizer. When I am finished bidding, I go to the Recorder Assistant and get the piece of paper with my number on it showing all my purchases. I take this to the Treasurer who totals the amount. I pay him or her and get the paper initialed and marked "paid". I take this paper to the holding area, and my purchased items are released to me by a Holding Area Organizer.

This process may seem to be an incredibly laborious process,

but when faced with one-to-two hundred frenzied potential buyers, it makes the night much more orderly and the auction a pleasure to attend. It definitely has saved our club members a lot of headaches.

I hope this information is helpful for any future auctions that other aquatic societies might be planning.

GUPPY FEEDING

By Bill Kohn
Guppy Association of Milwaukee
Excerpt from The Splash, June 1990

What foods do guppies need to be healthy? I think I know and so do a lot of breeders, but we are really guessing. How many times have you had a tank full of healthy guppies all of a sudden hide behind the box filter or get tail rot? Where do these problems come from and how can you prevent them?

Let's start with a sound feeding program. I think feeding often slightly is more important than the quality of the food. Diversify your feeding. Start by charting your feeding to evaluate the frequency, quantity and quality. Take a recipe card and write down the time of day you feed and what you feed. Evaluate this after a week and see if there is a good or bad pattern.

Next take another card, write the times your guppies should be fed and separate lines for the fry, juveniles and the adults. They all have different food requirements. Feed a lot of brine shrimp to the fry, some to the juveniles and only twice a week to the adults. Feed liver pastes, beef heart, and white worms to the older fry, juveniles and occasionally to the adults.

By charting your feeding program you just look at the chart and feed what is next. I take all my dry foods and number them One to Five. I feed dry food One in the morning and dry food Five in the evening. What I discovered by charting my feeding habits, that was in a nut, I feed the very rich diet to the fry as well as the adults. That is a very dangerous problem. I do not think the adults need as much meat as the fry do. They are not

in the explosive growth pattern as the fry.

I have also noticed that if you feed the best food all the time to guppies they will sometimes stop eating all together. Too much of a good thing can also be bad. I think the fiber of dry foods is beneficial for digestion and reduces the richness of the brine shrimp and paste foods.

When I feed, make sure they eat all I add to the tank. If they do not clean up everything they do not get brine shrimp or paste foods. I feed the food they least like in the morning first. After that I give them the brine shrimp. They are just like children. If you feed them their dessert first they can not clean off their plate.

I vary their diet so it is a little different each day. They get white worms only once a week. On Saturdays and Sundays I feed light, no meat to adults and brine only to fry. This completes a cycle. It is easy to follow, and basically once you have your chart on the fish room door, one quick glance and you know what you should feed today.

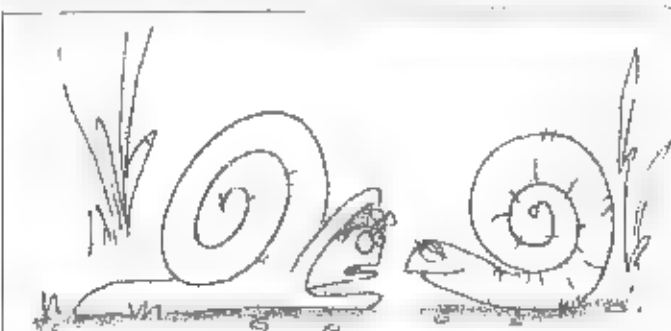
Think if you have more than one strain try two different feeding programs and see which one gives

you the best results. Or if you have a problem with some of your fish you can decide if your feeding program needs some type of improvement or change. I find the dry foods usually vary low in quality. I just do not get the size or growth rate on them that I do on my homemade concoctions.

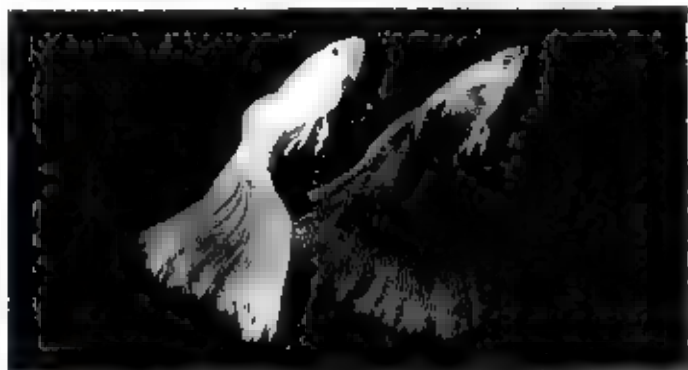
Just a word of caution on homemade foods. They are rich and fowl the tank up really fast. Use caution when feeding them. Change the filters often and siphon often and turn the drip system up if you have one installed.

Do not change your feeding system if your fish look great and you are satisfied. This idea is for the person that has guppies that need some size or have poor health. Always remember if things are going smoothly in the fish room, leave well enough alone. I think it is also a good idea to try new ideas on just some of your fish and see if it works for you. If it does then try it on all your fish. Because if it does not work you're only out a couple of tanks of fish.

The longer I have guppies and the different things I try I hope that eventually I will have it down to a science. It would be nice to have tremendous size and quality without Murphy's Law coming along just before show season and wiping you out.



"Very cute, but it will not work. You are still a worm to me!"



THE MAKING OF A HOBBYIST

THE PROBLEM OF EVOLVING INTO AN EXPERIENCED AQUARIST IS NOT A STRAIGHT LINE

By Jay Mendel, Curator of Fishes
Toledo Zoological Society
Reprinted With Permission
Aquarium Fish Magazine, June 1990

What makes a successful aquarium hobbyist? Are some people simply "naturals" when it comes to fishkeeping?

Actually, nobody is. Despite what appearances might lead you to believe at first. Suffice it to say that competent hobbyists are not born that way. Just as in any worthwhile venture it takes experience, patience and perseverance to truly become a proficient hobbyist. What then is the main key to achieving this goal? An ardent interest in aquatic creatures is perhaps the single strongest underlying theme among the best aquarists. Chances are you also have this interest to a high degree or you would not be reading this article.

Perhaps your aquariums do not look as nice as you would like, or the fish do not live as long as they should. With a significant amount of time and effort, an advanced hobbyist or aquarium professional might be able to offer you the assistance you require to realize these goals. However, there is an easier and more fulfilling course of action:

Solve the problems by yourself. The ideas presented here will help get you started on the right track.

A beginning aquarist is generally plagued by reactionary efforts. That is, a problem becomes critical before it is noticed and a solution must be hastily determined before too many fish are lost. Advanced hobbyists tend to operate in a more precautionary manner: problems are stopped before they become acute. Because of this, there is more time to spend working with the fish in breeding programs and for fish shows.

The difference between reaction and planning can be illustrated in many ways. One example is the use of water changes. The beginner typically performs a water change because some problem, such as a high ammonia level, has developed in a tank and the fish are suffering and dying. The advanced hobbyist foresees the eventual accumulation of dissolved compounds in the water as a normal part of the biology of the tank and performs the water change before the concentrations of these compounds become toxic to the animals.

Few would argue against the

fact that the more personal experience an aquarist has, the greater the likelihood that he or she will be more successful. Sadly, this apparent truth is not always borne out. Some people are prone to accumulating vast amounts of experience, but do not learn from past mistakes. They never seem to progress much beyond what would be considered a beginner's level. Getting beyond the novice stage CAN be done. I would like to show you some steps an inexperienced aquarist can follow to help ensure progression in the hobby that is as rapid and smooth as possible, from a basic hobbyist level to an intermediate stage and beyond.

The primary method one uses to become more successful in this hobby is to acquire as much information as possible. The ordinary techniques for gaining such knowledge work quite well. Your dealer will most likely prove invaluable in the beginning by supplying you with specific advice about a particular problem.

For example, you wish to set up an aquarium, so the dealer answers your basic questions, such as what equipment will be required, what fish to buy and what food should be fed. At some point, the person you have been dealing with at the store will "cut the apron strings" by suggesting other means for gaining additional knowledge, such as some specific books or a magazine like the one you are reading now.

The phase of the hobby seems to be a major stumbling block or stopping point for many people. Some individuals may be only moderately interested in the hobby, and the advice supplied by a dealer is sufficient for their needs. Often these people wish to maintain an aquarium solely for its aesthetic value or perhaps for its educational interest to their

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children. While there is absolutely nothing wrong with owning an aquarium for these reasons, many advanced aquarists would not consider these individuals to be true hobbyists.

For those with more than a casual interest in fishkeeping, there is the second step, in which the "hobbyist" takes the dealer's advice and begins to acquire a personal aquarium library including both books and subscriptions to aquarium magazines. By virtue of having purchased this magazine, you have more than likely already progressed to this second, very important stage.

The next level, step three is another point at which some hobbyists falter. They read all the available information, but have difficulty applying it to their own situations. These hobbyists still wish to be "led by the hand" but in this case, the familiar dealer is substituted by an author they have never met.

These hobbyists struggle to assimilate the information

presented and then apply it to their own tanks. They read that they should be caring for their tanks in a certain way and they try as best they can to duplicate these methods. Sometimes this works quite well and a hobbyist becomes very successful. In other cases, something is "lost in the translation," and try as they might, the hobbyist cannot duplicate the effective methods outlined by the author.

Sometimes the problem lies in the type of information the reader is attempting to utilize. Hobbyists are often confused if one author seemingly contradicts the advice of another. In some situations, this is simply a case of there being more than one acceptable way to handle a given problem. Other times, one of the pieces of information presented is flawed in some way. The key here is to try and determine the merit of each individual piece of information based on solid knowledge already acquired. If you were to read somewhere that "discuss breed well in saltwater aquariums," it would be quite easy to rule this information invalid based on your own personal knowledge and experience.

CONTRIBUTE TO SUCCESS OF GUPPY ROUNDTABLE

Made an amazing discovery in guppy breeding techniques, or food recipes guaranteed to raise ENORMOUS guppies, or located the keys to mastering the complexities of guppy genetics? Do not be shy about sharing the secrets of your success, your contributions are of paramount importance if we are to maintain the reputable quality of our publication. Whether you are an advanced or novice breeder, every subscriber to Guppy Roundtable has at least one article rambling around in their repertoire of tricks. This is the most effective forum for guppy breeders to meet colleagues and swap their best tips. Write an article for publication in Guppy Roundtable, the new official monthly publication of the International Fancy Guppy Association.

PLEASE FORWARD YOUR ARTICLES TO:

Davidene Tait
Newsletter Editor/Publisher
Pan Pacific Guppy Association
3819 Mantona Avenue Unit 8
Los Angeles, California 90034-5643

ARE THERE CARTOONISTS AMONG US?

Artists? "Experienced & funny" fish folks??? Sense of humor??? Dying to share your creative cartoons, doodles, drawings, illustrations and sketches with guppy enthusiasts around the world???? Send in your humorous "fishy cartoons" for publication in Guppy Roundtable.

PLEASE FORWARD ILLUSTRATIONS TO:

Davidene Tait
Newsletter Editor/Publisher
Pan Pacific Guppy Association
3819 Mantona Avenue
Los Angeles, California 90034

Another pitfall to utilizing printed information is over-extrapolation. It is very tempting to "borrow" information from other fields and attempt to apply it to aquariums. This worked well for the aquarists who adapted the concept of the wet/dry (trickle) filter from the field of sewage treatment for use in aquariums. On the other hand, there have been cases in which an idea functioned well in, for example, the field of human medicine, but failed horribly when it was applied to aquariums.

The fourth, and most important phase of the hobbyist's development is to be able to determine which course of action is the correct one. It is here when aquarists begin to rely less and less on outside information sources to help them decide on a particular direction to take in working with their aquariums; they start solving problems on their own. As an example, imagine the hobbyist who notices that one of his fish has ripped fins. He watches the tank for ten minutes, sees no apparent aggression from any of the other fish and then scratches his head and walks away. The next day, the fish with the ripped fins is dead.

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having been killed by a tankmate. The hobbyist, at a loss, writes the death off as being "unavoidable." What he did not realize in this case was three very important points:

First, except for instances of very strong aggression, the "fighting" may take place only sporadically and during a ten-minute viewing session one is likely to miss an incident. Secondly, the hobbyist also neglected to take into account that when one sits in front of an aquarium to examine the fish, the fish are busy examining him and have ceased "feuding" for the time being. Finally, due to the inherent differences in the behaviors of individual fish, expectations concerning typical behaviors, such as aggression, might not forewarn him of the problem. In this example, the only solution that the hobbyist would have is to take the time to correctly identify the problem on his own, in time to resolve it.

Another common problem is fish that leap to their death from an uncovered tank. Very often when this happens, the aquarist simply remarks, "Dam, did not know this species would do that," and covers

the tank to keep any remaining fish in place.

Preferably, he should have researched the jumping potential of the species beforehand, or better yet, simply covered the tank from the start, assuming that any fish, not just the ones identified in the literature, might jump out. An amazing number of problems can be overcome by simply noting that "something does not look right in the tank," and rather than waiting to see what happens, taking immediate steps to correct the potential problem. Of course, this does not imply that one should begin a potentially dangerous treatment based on little information. However, given the choice of trying a safe remedy versus doing nothing at all, one is sometimes better off trying the treatment if there is clearly something amiss with the tank.

In many cases, the hobbyist needs more than just visual clues. The causes of diseases, for instance, are often not visible. The tools, such as water test kits, microscopes and so on, allows one to "see" invisible problems, perhaps nitrite poisoning or

a fluke infestation. Of course, the information in aquarium literature becomes important in applying the information these devices supply by providing advice that can be directly acted upon.

Perhaps the final step an aquarist can take is to supply other hobbyists with information that they have developed on their own. Joining a specialty aquarium society is possibly the best way to accomplish this. At the club meetings and through newsletters, you can pass on your hard earned information to other interested hobbyists. At the same time, other aquarists will be doing the same, supplying you with much needed information. Writing articles and even books are also possibilities. For some people being an active aquarium hobbyist is not enough, and they progress into the realm of professional aquarium keeping, perhaps through starting their own pet store or by working at a public aquarium.

Please keep in mind that this article is not a definitive guide to becoming an advanced hobbyist. The ideas presented were only examples of guidelines to follow. This is a start, the rest is up to you!

small stream of bubbles in sufficient. Small bubbles are just as good as large ones.

ARTIFICIAL LIGHTING

Artificial light should be above the aquarium and very close to the water. Bulbs can be in the water as long as they are cool when placed in the tank water. Bulbs that are in the water definitely have a longer life. Lighting must be reduced if daylight is also used. If you have a cool place, the light supplies heat. If too much heat is given off from the bulb, it must be raised away from the water and tank to avoid raising the temperature of the water beyond a tolerable level for the fish.

INDUCING MUTATIONS

By: Harry Nelson
Excerpts From: FGA Bulletin, August 1974

It is not every day that one gets a call from a friend who asks if one wants the use of an X-ray machine for experimental purposes. It was just such a call which I received almost two years ago from Stan Mruk of Chicago after he had conducted an experiment with an X-ray treatment of some guppies. He informed me of his results and suggested an experiment of my own, offering me the use of the X-ray machine.

One week before, gave some of my own guppies an X-ray treatment, Stan had given some of his fish five thousand roentgen for five minutes. Stan did not notice any ill effects on the fish, but as a matter of fact said that he had never seen any fish so active.

I was glad to accept the use of the X-ray machine. Inasmuch as several of our local club discussions were spent speculating as to how we could possibly upset the genetics of our fish. Furthermore,

I had noticed that everytime I got a decent yellow strain going, a lot of black pigmentation cropped up from time to time. I had also noticed that a good many times when blacks were exhibited, or somewhat excited or frightened, they would show up as a darkened yellow or an olive green, unless the breeder used anise or some other coloring agent. Therefore felt that this was an opportunity to see if with the X-ray could make yellow guppies produce black.

I exposed some pregnant females to ten thousand roentgen for five minutes. Pregnant females were used so that I might at least have some young stock to work with had the subjects died shortly after the treatment. Contrary to my expectations, the treatment had no sterilizing effect. Two weeks after the treatment, the first fry

were born, and fry continued to be born every twenty-one days thereafter.

At the age of one month it was apparent that there were a lot of black young, and these developed perfectly until the age of three months. At that stage of growth, every black tailed male died. This pattern continued for six generations...one third of each brood being black. The yellow fish always did well, on the other hand, for the care that they received.

I felt that this was sufficient experimental work to demonstrate that black fish were dying of a cancer, and it seemed to me that whatever was causing the dark pigmentation was also causing the cancer.

The doctor who had done the X-ray work for us had told us that we might get more mutants if we crossed an X-rayed fish with a normal guppy. With this in mind, I crossed the young yellows with normal stock as soon as the former were old enough.

I noticed two extremely short fish in the first batch of hybrids, and these developed into two females possessing one third of the normal peduncle area. I felt these with the rest of the brood. As soon as they appeared pregnant, I removed them to a breeding trap, wondering if they would produce short males.

In two months I had short fish of both sexes. The males of these short fish developed extremely well, and they all seemed to develop into delta tails, the most desired of show fish. Another remarkable thing was that they could carry such a large tail in proportion to their body size than any other show fish that I have seen.

Now, about this time you are probably wondering how you could ever win a show with a shorter-looking bodied fish. Well, the fish keeps growing with age and it does not take long before this fish looks almost as long as its longer-bodied brother. This is, of course, an optical illusion, but the fish swim so well and are so well balanced, that they have a tendency to stay at about half the depth of the tank. You would pick up a great many more points on condition than you could lose on body length or size. No fish that is tall heavy lies at the bottom of the tank or has trouble swimming, has any business winning a show, no matter what its size or how good its color.

In the course of my experiments, I ran into some trouble with *Kribia* and lost all of my older fish, but I now have some which are approximately eleven months old that certainly show some promise of being the fish of the future. However, there is such a thing as going overboard and pulling too short a body on a fish.

GUPPY GAMBITS

OXYGEN

Fish like land animals must breathe oxygen to live. However they get along with less than animals. They can live on the small amount of oxygen found in the water which they breathe through their gills. Water has an affinity for it. The colder the water the more air it can absorb. The larger the air surface the more rapidly it can replenish the oxygen used. Therefore it will be seen that the actual fish capacity of any body of water is depended mainly on the area of the water surface. Depth counts for nothing in this respect. Oxygen can be supplied

in the water by two means. Either by healthy plants or artificial aeration.

AERATION

One of the greatest inventions for the aquarium is the pump. When it is connected with a filter or airstone, it forces the water to circulate in the tank. As the water moves along the surface, it picks up fresh oxygen. Aeration is extremely important in hot weather when the oxygen capacity of water is low. When overcrowding is unavoidable, a stream of air has the effect of practically doubling the fish capacity of the aquarium. A

PROTEIN ZONES

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SUGGESTIONS FOR A VITAL AQUARIUM SOCIETY

By Henry R. Otter D.V.M.
Aquarium Club Of Lancaster County
Excerpts From *Wet Pet Gazette*, May 1982

During the years I have been involved with the hobby have seen clubs come and go. From these experiences, many suggestions come to mind. There are no set rules to guarantee a successful club because some clubs have special problems.

A newsletter can be an important part of your organization. Have an editor who enjoys his job, not one who is monthly plagued with meeting a deadline and having to scrounge for news items. Members can help by realizing that he should be just an editor. Do not saddle him or her with the physical responsibility of the printing, stapling, mailing and distribution. See that your editor gets information about the club from many of you. Do not make him hunt you down for information. Committees should give him a written report of their activities. Make a special effort to get the reports to him before his deadline.

Feel that many items that consume time at your monthly meetings should be included in the newsletter such as coming events, future programs, especially next month's program so that members can make an effort to attend if they are interested in the subject. Various articles, especially original articles from your members are needed. Remember it is a newsletter and not intended to compete with the many hobbyist magazines.

Keep the business part of your regular meeting to a minimum. This can be achieved by making better use of your newsletter and executive committee meetings. Bring up only that business which requires a decision or opinion by the majority of members. The executive committee should handle most of the organization's business, that is one of their duties along with planning. The executive committee should meet approximately one week following the regular meeting while issues raised at the monthly meeting are still fresh in mind. It also provides time to take action before the following month's meeting. Otherwise the executive committee



Green Delta
Photograph courtesy of David Wexler

has to conduct its business by phone or the president has to act on his own. It is easy to put off a telephone call and many times difficult to reach someone you want. All of this adds up to things not getting done.

Some clubs make the mistake of having their programs at the beginning of their meeting for the convenience of visitors. That is very thoughtful but when the program ends so does your contact with the visitors. You lose the opportunity to get acquainted with them. They in turn, lose the chance to find out what your club is all about. If you are afraid to expose them to any dissension in the club, get rid of the dissension and not the prospective members.

Concerning programs, have as many live programs as possible. Exchange speakers with other clubs, a speaker for a speaker. When you have slide programs, have an experienced member of the club familiar with the topic handle the commentary. Be sure he or she has a chance to edit the slides before meeting time.

Aggressively publicize your society. Keep posters (continued on page nineteen)



Breeder Female
Photograph courtesy of David Wexler

displayed in fish and pet shops up-to-date and visible. Local newspapers are usually very cooperative in announcing meetings or special events, as long as you meet their deadline for publication. Have a public relations chairman to introduce new or prospective members to the club. When new members sign up present them, in a friendly personal way, a portfolio containing information such as: by-laws or constitution, bowl shows, auctions, a membership roster, etc. Do not make it necessary for them to gain this knowledge by hearsay after many meetings. Present this folder to them in front of the club membership. It is a more impressive welcome and members can see who they are, rather than just reading off their name. Think back to your first experience in joining an aquatic organization. How would you feel?

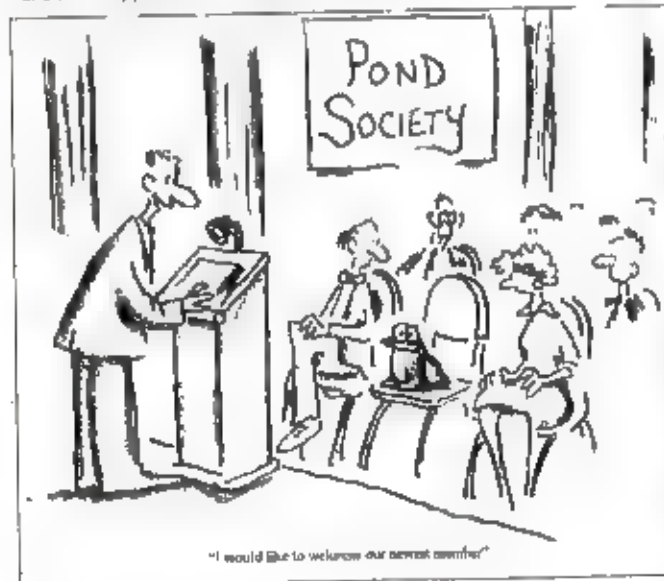
For a successful club, most members should be active and willing to serve. The officers should realize they are the main force in the club and should meet their collective obligations. Members should be appointed to committees

on a face to face basis, not by asking for volunteers. Members, for one legitimate reason or another can not serve in every capacity but there is usually somewhere that they can contribute. Do not be a "bump on a log" but a "sprout for life and growth".

Having committees submit reports that can be passed on makes the work of future committees much easier. I do not imply that committees have to duplicate past committees, these reports should be used only as a guide. As a matter of fact, changes can be good and should be readily encouraged.

When in a tropical fish store, take time to talk to people mulling around. They have some interest in the hobby or they wouldn't be there. Do they have a particular type of fish they are interested in? Are other members of their family involved? Invite them to a meeting. Tell them what your club is about.

Every club is only what its members are and more important what they do. Remember these are only suggestions; use them as you see fit.



Guppy Swap Shop

FOR SALE: Blue, Green, Half-Black AGC, Half-Black Panda, Red, Variegated Snakeskin Deltas and other colors available at different times. One bio \$35.00; two bios \$60.00, three bios \$75.00 plus \$15.00 Express mail or \$5.00 Priority Mail postage. Send inquiries to: Jim Alderson, 20935 Golden Springs Drive, Diamond Bar, California 91769.

CLUB ON A MISSION: The Pan Pacific Guppy Association is looking to purchase several different classes of guppies not currently within our club. Anyone with stock BLACK, BRONZE, MULTI or YELLOW DELTAS for sale or trade please contact: Davidene Tall, 3819 Montrose Avenue, Los Angeles, California 90034 310 835-1134 (call collect).

FOR SALE: Used air pumps, filters, gang valves, heaters, tanks and other assorted aquarium related items. Please call for delivery price and product information. Dennis Brown, 3742 Jasmine Avenue, Los Angeles, California 90034, 310 555-0848.

MICROWORM & VINEGAR EEL CULTURES: Excellent, inexpensive live foods for feeding guppy fry. Guaranteed live delivery \$4.00 per liter culture (instructions included). This low price includes all handling and shipping charges. Send check or money order to Davidene Tall, 3819 Montrose Avenue, Los Angeles, California 90034.

FOR SALE OR TRADE: Limited stock of true breeding Half-Black Blue Deltas available for sale or trade. \$20.00 per trio, no discount for multiple bios, plus \$5.00 Priority Mail postage. With trade for true breeding Green Deltas. Paul Graci, 1381 1/2 North La Brea Avenue, Los Angeles, California 90028; 213 851-4371.

Attempting to buy, sell or trade hobby related equipment or supplies? A new monthly feature of *Guppy Roundtable* is a classified advertisement section restricted to subscribers of *Guppy Roundtable*. A maximum of 10 word advertisements per item may be purchased for the reasonable price of \$2.00 per month. This special advertisement rate applies to purchase advertisements ONLY.

The Newsletter Editor/Publisher reserves the right to refuse to publish any inappropriate advertisements. Submission of ad copy to the Newsletter Editor/Publisher does not constitute a commitment by Pan Pacific Guppy Association to publish the advertisement.

PLEASE MAIL AD AND PAYMENT TO:

Davidene Tall
Newsletter Editor/Publisher
Pan Pacific Guppy Association
3819 Montrose Avenue, Unit 8
Los Angeles, California 90034

LET'S TALK ABOUT STRESS IN GUPPIES

By: Elvie Bryant
Excerpted From IFGA Bulletin, February 1999

Stress is another point to ponder in raising guppies. Some of our mistakes can kill or badly damage good guppies. For example, raising guppies in a glass bottom unpainted tank will cause stress. If these guppies are moved to a painted bottom, reflection is the cause.

Trying to keep your tanks too clean is another cause of stress. Overfeeding is the major factor in this case. Trying to control your heavy handed feeding will cut down on the debris on the bottom of the tank. This will result in fewer cleanings. Guppies are excellent eaters, but when new foods are introduced be sure less food is fed in the beginning until the guppies grow a fondness for the new foods. Then again they may reject the new foods, thereby creating debris on the bottom of their tank.

Many breeders swim a net to pick up uneaten foods, thereby avoiding

water changes of frequent periods and of less amounts of water changed. Overheating of water, replacing the water to be changed is another stressful item. Often the temperatures of water being put into the tank are only tested with your hand or finger. The water temperature can vary by at least ten degrees. I tested my ability to tell the temperature of water being siphoned into the tank from a reserve water barrel. I missed the temperature by fifteen degrees, so guppies are put into a stressful situation.

Siphoning from your tanks can be extremely stressful to your guppies. Large siphoning hoses should be avoided. They drain far more water faster than the debris is removed from your tanks. Smaller siphon hoses give you more control on the amount of water being removed. Remember tanks on a higher level will drain faster than tanks closer to the floor therefore causing more water to be removed.

Overheating your tanks is very stressful. You create an unnatural

condition of high temperatures for your guppies. You can shorten their life span. Sometimes summer temperatures cannot be avoided, but in places where air conditioning prevails, the opposite can be seen. Lowering of temperatures below the normal levels can cause the water temperatures to drop ten degrees. This will cause your guppies to hang at the top and have no movement in this situation. Air temperatures vary greatly from water temperatures.

Last, but certainly not to be forgotten, netting your guppies. More deaths have occurred just trying to net them for shows, dropping them, frightening them, chasing them. You should move in a very slow, deliberate manner never exciting the guppy. Removing the female is another stressful situation. If the female can be removed before she has her fry, terrific, but if you see her having young, do not try removing her. Carefully throw some type of cover for the young, because you could frighten the female to death. If the female is recorded (date of her last dropping of guppy fry) you can remove her approximately three weeks before the birth of the fry and prevent the stress of moving.

tropical fish (for that matter) but the tank should be allowed to stand with aeration for a few days before introducing fish.

A more common cause of water cloudiness is OVERFEEDING. Uneaten food when allowed to remain in the tank gives rise to millions of bacteria and infusoria. The decaying food also produces carbon dioxide which reduces the oxygen content of the water. This along with the bacteria and infusoria who are now competing with the fish for oxygen give rise to a very serious situation. If the cloudiness is just beginning to appear and you suspect overfeeding, stop feeding for three or four days. Siphon off the bottom of the tank and replace

half of the water with fresh aged water. If you possess a power filter or a fast flowing outside filter start it working as soon as you notice the cloudy condition. If you do not have either of these increase the air output through your existing filter and add one quarter grain of Potassium Permanganate per gallon of water or use one of the commercial preparations found in the pet shops which contain this chemical. If the tank has become too bad before you noticed or attempted to correct, it is best to remove the fish, wash and reset the tank. The old adage that an ounce of prevention is worth a pound of cure holds true. Train yourself to feed small amounts frequently and siphon off excess foods and fish excrement often

CURES FOR CLOUDY WATER

Cloudy water can cause real headaches to the guppy breeder at times. The milky appearance is not only unsightly but often times indicates the presence of more serious water problems. The cloudiness may have originated from one of several possible causes. One type of cloudiness often seen for the first few days in a newly established tank is usually caused by the settling out of small particles of suspended minerals in the water. This type of cloudiness is not harmful to your guppies (or other

SOME OF THIS, SOME OF THAT

By: Paul Gorski, Judging Board Chairman
Stan Shubel, Past Judging Board Chairman
International Ferret Guppy Association

Question: Should healthy guppy tank setups, or any aquarium setups for that matter, be sterilized as part of periodic maintenance?
- Nick Visser

STAN SHUBEL: While not mandatory, it is a good idea when transferring fish from one tank to another to sterilize your tanks. Bacteria, parasites or other diseases may be present in a tank and not effect the fish in the tank, but by adding new fish they could possibly come down with a disease or become stressed due to the conditions present in the tank.

Question: How does a breeder perform frequent partial water changes without spreading disease from tank to tank?
- Sydney Littenberg

PAUL GORSKI: Let us first hope that your setup is not inundated with tank after tank of diseased guppies and assume that the occasional sick tank needs to be siphoned. Always siphon that tank(s) for test because usually have added the universal tonic "clorox" making sure that pull clean water through the hose/pump system afterward. If you just want to do heavy water changes to your sick tanks I would recommend a little clorox in a bucket of water (1/4 cup per four gallons) and siphon a little of this solution between tanks. Let me add, that no matter what preventative methods we might employ guppies do get sick, tanks will break down and we will contribute to the spread of the disease. We do what we can and hope for the best.

Question: What is the optimal age to breed guppies?
- Kevin Muir

STAN SHUBEL: There are no hard and fast rules that would apply in this case. Generally speaking, it is advisable to breed fish at about four to six months of age. If you have a problem getting the females pregnant you might breed them as early as 2 1/2 months. I have successfully bred them at twelve to fourteen months of age but would not recommend waiting this long.

The rationale behind the four to six month age bracket, is that by then

the caudal and dorsal on the male is fairly well filled out and you can pick the best for breeding.

Question: What records do you recommend a novice breeder keep concerning their guppy breeding regimen?
- Kevin Muir

PAUL GORSKI: When I first started kept records of birth, genetic history (strain, from where, when) and a physical description of the fish and their offspring. Now, I do not do quite that much and sometimes pay the penalty. On balance, a novice cannot keep too many or too detailed records. I can see that future swaps or purchases will be preceded by video exchanges.

STRESS RELIEF

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the shock of a new environment: heavily chlorinated water, toxic water containing copper, mercury or lead, routine water changes. They

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MESSAGE FROM THE PRESIDENT

By Jim Alderson, D.V.M., President
International Fancy Guppy Association
Pan Pacific Guppy Association

Dear Members:

I have always enjoyed the Chicago meetings and annuals. They are well attended and the club is very good at hosting the affair. I hope everyone will make an effort to attend. In my opinion there is no better way to learn guppies than to watch really knowledgeable breeders and judges at work at a show. Remember to save your questions until after the class has been judged.

If you are just now setting up breeders for the next show season, you had better turn up the temperature on the fry and really push them if you expect them to be ready by next season. Starting them off in a small tank like a two and one-half or one of those net type breeding traps, really seems to accelerate growth during the first three weeks.

I hope everyone comes to the meeting with some new ideas and ways to implement them. The last couple of years have seen many changes for the International Fancy Guppy Association. I think we should settle in and really work to improve the club.

Ideas will not work unless someone takes the time to implement them and donates some time to improve the club. Feel free to make recommendations at the meeting, but also be prepared to be appointed to a particular task. The International Fancy Guppy Association needs a broader base of participation from its clubs. If each club could come with their own plan for our continued growth and improvement as well as an offer to oversee the venture, we would have one great meeting.

New members are still screaming for a greater availability of fish. Try to raise extra fish to sell, donate or swap with other members or clubs. Contact Steve Kwartler to add your name to the list of the Clearing House.

We are all in this for one purpose, to raise fancy guppies. This is a hobby and no one is getting a cent for all the hours of hard work at shows, at home in the fishroom or at the typewriter. We are always open to constructive criticism at the meetings, but negatively or personal gripes have no place in a meeting forum. Looking forward to seeing everyone, and perhaps meeting for the first time, new members at the Annual.

PROPOSED BOWL SHOW SCHEDULE

The proposed bowl show schedule for the next show season is as follows:

SECOND HALF 1993-1994 SEASON

HEARTLAND GUPPY CLUB
April 30 - May 1, 1994
GATEWAY GUPPY ASSOCIATES
May 21 - 22, 1994
COLUMBUS OHIO GUPPY SPECIALISTS
June 18 - 19, 1994 or June 25 - 26, 1994

FIRST HALF 1994-1995 SEASON

EAST COAST GUPPY ASSOCIATION
July 18 - 17, 1994
PAN PACIFIC GUPPY ASSOCIATION
August 6 - 7, 1994
NEW ENGLAND FANCY GUPPY ASSOCIATION
August 27 - 29, 1994
GUPPY ASSOCIATES INTERNATIONAL OF CHICAGO
September 17 - 18, 1994
GUPPY ASSOCIATES OF MILWAUKEE
November 4 - 5, 1994

International
Fancy Guppy Association
Officers

PRESIDENT
JIM ALDERSON
8935 Golden Springs Drive
Diamond Bar, California 91765

VICE PRESIDENT
MARLYN JOHNSON
25 Warren Avenue
Amesbury, Massachusetts 01913

SECRETARY
ROSE MCCREARY
3524 Blue Heron Drive
Pinecrest, Missouri 63331

TREASURER
BOB STRATTON
808 Allen Avenue
Olathe, Missouri 64601

JUDGING BOARD CHAIRMAN
PAUL GORSKI
232 Marsh Island Drive
Chesapeake, Virginia 23320

PARLIAMENTARIAN
PAUL BLOOD
3417 Cumberland Drive
Pineapple, Pennsylvania 19128

Committee Chairpersons

AWARD POINTS CHAIRPERSON
RUDY MARSHBURN
7408 Convent Road
Raleigh, North Carolina 27604

CLEARINGHOUSE/SHOP
STEPHEN KWARTLER
1847 Muller Avenue
Brooklyn, New York 11202

COMPUTER/INFORMATION SERVICE
CHRISTOPHER HIGGINS
848 Greenwood Drive
Vero Beach, Florida 34983

MEMBERSHIP
MARLYN JOHNSON
25 Warren Avenue
Amesbury, Massachusetts 01913

NOMINATING
GENE GOLDBACH
720 East Jackson Street
Moms, Illinois 60450
MIKE LASTELLA
2240 York Boulevard
Oceanside, New York 11752
STAN SHUBEL
8715 Horton Lake Drive
Hazel, Michigan 48843

PUBLICITY
DAVID POLUNAS
848 North Bridge Street
Bridgewater, New Jersey 08807

1993 INTERNATIONAL FANCY GUPPY ASSOCIATION
ANNUAL MEETING AGENDA

Roll Call.
Treasurer's Report
Judging Board Report
Membership Report
Publicity Report
Publications Report
Guppy Swap Shop
Show Rotation Report
Nominations Committee
Awards Report
Old Business
New Business
Adjournment

Rose McCreary, Secretary
Bob Stratton, Treasurer
Paul Gorski, Chairperson
Marlyn Johnson, Vice President
David Polunas
Davidens Teit, Editor
Stephen Kwartler
Marlyn Johnson
Mike Lastella
Rudy Marshburn
From Minutes
From The Floor
Harold Morgan

Guppy Club Contact Members

COLUMBUS OHIO GUPPY SPECIALISTS
DON BAILEY
8810 Elm Avenue, Columbus, Ohio 43204
914 278-2888

EAST COAST GUPPY ASSOCIATION
STEVEN DIACOBELLO
225 Frederick Avenue, Mt. Vernon, New York 10553
914 687-8482

FANCY FINNY FRIENDS
PETER TEDESCO
188 Drexel Avenue, Maywood, New Jersey 07067
201 987-1485

GARDEN STATE GUPPY ASSOCIATES
JAMES MACHETTO
27 Wayne Road, New Jersey 07110
201 845-7882

GATEWAY GUPPY ASSOCIATES
DON HURT
3000 Ridgewood Drive, St. Charles, Missouri 63076
314 681-8374

GREATER DELAWARE VALLEY GUPPY SOCIETY
KENNETH M. GORD
2417 Curran Road, Philadelphia, Pennsylvania 19118
215 824-8124

GREATER VIRGINIA GUPPY CLUB
PAUL GORDON
233 Marsh Island Drive, Chesapeake, Virginia 23320
404 347-7828

GUPPY ASSOCIATES INTERNATIONAL OF CHICAGO
JIMMY L. MACHETTO
720 East Jackson Street, Mount Vernon, Ohio 43006
614 847-0238

GUPPY ASSOCIATES OF GREATER CLEVELAND
CHARLES HALL
6873 Broadway Avenue, Cleveland, Ohio 44108
216 641-8280

GUPPY ASSOCIATES OF LAFAYETTE
JIMMY ONI
4708 Marshall Drive, Lafayette, Indiana 47905
317 488-9993

GUPPY ASSOCIATES OF MILWAUKEE
MARTY HILL
2807 South 27th Street, Milwaukee, Wisconsin 53218
414 873-4924

HEARTLAND GUPPY CLUB
DORNA SCHULTZ
11829 England Drive, Overland Park, Kansas 66155
913 348-2973

HOUSTON GUPPY CLUB
JIMMY MORGAN
14107 Sten Place, Houston, Texas 77077

MICHIGAN GUPPY BREEDERS
DAN WHITNER
17 John Street, Windsor, Ohio 43088
419 378-3171

NEW ENGLAND FANCY GUPPY ASSOCIATION
JIM L. MACHETTO
84 Elm Avenue, Bridgewater, Massachusetts 01907
617 988-7524

PAN PACIFIC GUPPY ASSOCIATION
DENNE BROWN
5742 Harding Avenue, Los Angeles, California 90034
213 556-0848

SOUTH JERSEY GUPPY GROUP
DAVID POLUNAS
15 Shadel Road, South Bound Brook, New Jersey 08807
908 827-8023

HELP PROMOTE THE HOBBY

Everyone's assistance is needed to compile an up to date list of breeding stock for sale or trade as well as other related items that you might be searching for (articles, books, bulletins, magazines, old publications, etc.). I will also help arrange club contacts for those hobbyists trying to join or start a club in their area. What need from each of you is for you to send me your name, address and telephone number if possible. Explain what strains you are working with or looking for and what is available. Also, please note if you are willing to accept correspondence or telephone calls requesting information. If you are looking for breeding stock you can make your initial contact through the Clearing House. We will make every effort to put you in touch with a reputable breeder. Send information and inquiries to:

Stephen Kwartler
IFGA CLEARING HOUSE
1847 Muller Avenue
Brooklyn, New York 11202
718 629-8508

GUPPY GENETICS
GOT YOU DOWN IN THE DUMPS?

Feeling overwhelmed when muddling your way through mastering the complexities of guppy genetics? Curious about the latest techniques, technology and trends of breeding fancy guppies?? Are you totally befuddled over what to feed your guppies to ensure optimal growth potential?? Submit your questions for thought provoking answers by Paul Gorski, Judging Board Chairman and Stan Shubel, Former Judging Board Chairman in *Some of The, Some of Them*. Forward questions for personal reply in care of:

Davidens Teit
Pan Pacific Guppy Association
3810 Marlton Avenue, Unit 6
Los Angeles, California 90034-5843

OFFICIAL INTERNATIONAL FANCY GUPPY ASSOCIATION SHOW RESULTS

GATEWAY GUPPY ASSOCIATES SEPTEMBER 18 19, 1993 FIVE HUNDRED FORTY-FIVE ENTRIES

BEST OF SHOW TANK (TWENTY-FOUR ENTRIES)

FIRST PLACE JIM ALDERSON Red	THIRD PLACE ELAINE POY Blue/Green Biotype
SECOND PLACE LARRY HOLLINGWORTH Half-Black Blue	FOURTH PLACE MICHAEL O'LEARY Novice

BEST OF SHOW MALE DELTA (TWENTY-FOUR ENTRIES)

FIRST PLACE JIM ALDERSON Red	THIRD PLACE JIM ALDERSON Blue
SECOND PLACE JIM ALDERSON Green	FOURTH PLACE ANN RODRIGUEZ Half-Black Blue

BEST OF SHOW MALE SWORD/VEIL TAIL (SEVEN ENTRIES)

FIRST PLACE JIM ALDERSON Solid Veil	THIRD PLACE STEVE WELLS Veil/Swordtail
SECOND PLACE STEVE WELLS Single Swordtail	FOURTH PLACE BOB RESCH Double Swordtail

BEST OF SHOW FEMALE (SEVEN ENTRIES)

FIRST PLACE Tom Heggal Novice	THIRD PLACE TOM STEGOALL Black/Green
SECOND PLACE MICHAEL BREWER AOC	FOURTH PLACE TOM PETERS Black

BREEDER MALE (TWO ENTRIES)

FIRST PLACE JIM ALDERSON	SECOND PLACE JIM ALDERSON
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BREEDER FEMALE (SEVEN ENTRIES)

FIRST PLACE TOM STEGOALL	THIRD PLACE STEVE WATKINSON
SECOND PLACE TOM STEGOALL	FOURTH PLACE M AND K BLAIR

VEIL CLASSES

BOOBYE COLOR (THREE ENTRIES)	HALF-BLACK (SEVEN ENTRIES)	SHAKEDOWN (SEVEN ENTRIES)	SOLID CAUDAL (TWELVE ENTRIES)	VARIATED CAUDAL (SEVEN ENTRIES)
1 Gene Golimowski	1 M and M Golimowski	1 Jim Allen	1 Jim Alderson	1 Steve Wells
2 Tom and Pat Allen	2 John and Brenda Thale	2 Jim Allen	2 Jim and Brenda Thale	2 Dennis Brown
3 Dwight Parlon	3 Gary Long	3 Tom and Pat Allen	3 Tom and Pat Allen	3 Dick and Ann Wagner
4 M and M Golimowski	4 Disqualified	4 Tom and Pat Allen	4 Tom and Pat Allen	4 Jim Allen

FEMALE CLASSES

ALBINO FEMALE (THREE ENTRIES)	AOC FEMALE (SEVEN ENTRIES)	BLACK FEMALE (SEVEN ENTRIES)	BLUE/GREEN FEMALE (FOUR ENTRIES)	BRONZE FEMALE (FOUR ENTRIES)
1 Gene Golimowski	1 Mike Brewer	1 Tim Peters	1 Tom Stegoall	1 Gene Golimowski
2 Gene Golimowski	2 M and M Golimowski	2 Tim Peters	2 Tom Stegoall	2 Tom and Pat Allen
3 M and M Golimowski	3 Mike Brewer	3 Jim and Brenda Thale	3 Tom Stegoall	3 Tom and Pat Allen
4 Gene Golimowski	4 Tom Stegoall	4 Tim Peters	4 Tom Stegoall	4 Tom and Pat Allen
GOLD FEMALE (SEVEN ENTRIES)	HALF-BLACK AOC FEMALE (FOUR ENTRIES)	HALF-BLACK RED FEMALE (FOUR ENTRIES)	RED FEMALE (THREE ENTRIES)	
1 Steve Swinkowski	1 M and M Golimowski	1 Jim and Brenda Thale	1 Elsie and Marie Bryant	
2 Frank Baris	2 Mark and Pam Lewis	2 Gary Long	2 Frank Baris	
3 Frank Baris	3 Mark and Pam Lewis	3 Jim and Brenda Thale	3 Frank Baris	
4 Disqualified	4 Frank Baris	4 Jim and Brenda Thale	4 Frank Baris	

JUDGES

John Allen, Frank Baris, Gene Golimowski, Mike Golimowski, Jim Allen, Leroy McCrory, Rose McCrory, Ted Lobello, Steve Wells

OBSERVERS

Frank Baris, Kathleen Deutsch, Steven Deutsch, Mark Lewis, Gary Long, Elizabeth Pirok, Steven Swinkowski, Mike VanNest

JUNIOR DELTA

- 1 Keith Golimowski
- 2 Keith Golimowski
- 3 Keith Golimowski
- 4 Wendy Long

JUNIOR VEIL

- 1 Elizabeth Pirok
- 2 Elizabeth Pirok

JUNIOR TANK

- 1 Wendy Long
- 2 Andy Bush
- 3 Wendy Bush
- 4 Andy Bush

JUNIOR FEMALE

- 1 Wendy Long
- 2 Keith Golimowski
- 3 Elizabeth Pirok

NOVICE DELTA

- 1 Michael O'Leary
- 2 Michael O'Leary
- 3 Tom Stegoall
- 4 Michael O'Leary

NOVICE VEIL

- 1 Bob Resch
- 2 Bob Resch
- 3 Bob Resch
- 4 Bob Resch

NOVICE TANK

- 1 Michael O'Leary
- 2 Michael O'Leary
- 3 Tom Stegoall
- 4 Tom Stegoall

NOVICE FEMALE

- 1 Tom Stegoall
- 2 Tom Stegoall
- 3 Tom Stegoall
- 4 Michael O'Leary

ALBINO DELTA (THREE ENTRIES)

- 1 Dwight Parlon
- 2 Mark and Pam Lewis
- 3 Keith Golimowski
- 4 Bill Khan

AOC BICOLOR DELTA (FOUR ENTRIES)

- 1 Michael Brewer
- 2 Steve Wells
- 3 Steve Wells
- 4 Steve Wells

BLUE DELTA (THREE ENTRIES)

- 1 Jim Alderson
- 2 Jim Alderson
- 3 Jim Alderson
- 4 Gene Golimowski

BRONZE DELTA (TWO ENTRIES)

- 1 Tom and Pat Allen
- 2 Tom and Pat Allen

GREEN DELTA (THREE ENTRIES)

- 1 Jim Alderson
- 2 Tom and Pat Allen
- 3 Jim Alderson
- 4 Jim Alderson

H-B BLUE DELTA (THREE ENTRIES)

- 1 Ann Rodriguez
- 2 Ann Rodriguez
- 3 Wendy Hollingworth

H-B PURPLE DELTA (THREE ENTRIES)

- 1 Stephen Kwarter
- 2 Stephen Kwarter
- 3 Jim and Brenda Thale

H-B YELLOW DELTA (FOUR ENTRIES)

- 1 Elsie and Marie Bryant
- 2 Elsie and Marie Bryant
- 3 Elsie and Marie Bryant
- 4 Elsie and Marie Bryant

PURPLE DELTA (THREE ENTRIES)

- 1 M and M VanNest
- 2 Gene Golimowski
- 3 Gene Golimowski

RED BICOLOR DELTA (THREE ENTRIES)

- 1 Dick and Ann Wagner
- 2 Jim Allen
- 3 Disqualified
- 4 Disqualified

SHAKE VARI DELTA (THREE ENTRIES)

- 1 Michael Brewer
- 2 Michael Brewer
- 3 Michael Brewer
- 4 Michael Brewer

SWORDTAIL SINGLE (FOUR ENTRIES)

- 1 Steve Wells
- 2 Steve Swinkowski
- 3 John Allen
- 4 Steve Swinkowski

ALBINO TANK (THREE ENTRIES)

- 1 Dwight Parlon
- 2 Dwight Parlon
- 3 Mark and Pam Lewis

AOC BICOLOR TANK (FOUR ENTRIES)

- 1 Steve Wells
- 2 Steve Wells
- 3 Steve Wells
- 4 Steve Wells

BLUE TANK (TWO ENTRIES)

- 1 All Entries Disqualified

BRONZE TANK (TWO ENTRIES)

- 1 Tom and Pat Allen
- 2 Tom and Pat Allen

GREEN TANK (THREE ENTRIES)

- 1 Jim Alderson
- 2 Jim Alderson
- 3 Jim Alderson
- 4 Disqualified

H-B BLUE TANK (THREE ENTRIES)

- 1 Wendy Hollingworth
- 2 Wendy Hollingworth
- 3 Ann Rodriguez

H-B PURPLE TANK (FOUR ENTRIES)

- 1 All Entries Disqualified

H-B YELLOW TANK (THREE ENTRIES)

- 1 Elsie and Marie Bryant
- 2 Elsie and Marie Bryant
- 3 Gary Long

PURPLE TANK (THREE ENTRIES)

- 1 M and M VanNest
- 2 M and M VanNest
- 3 Jim Alderson

RED BICOLOR TANK (THREE ENTRIES)

- 1 Rusty Blader
- 2 Rusty Blader
- 3 Disqualified

SHAKE VARI TANK (FOUR ENTRIES)

- 1 Michael Brewer
- 2 Michael Brewer
- 3 Michael Brewer
- 4 Michael Brewer

SWORDTAIL TANK (FOUR ENTRIES)

- 1 Steve Wells
- 2 Steve Wells
- 3 Steve Wells
- 4 Disqualified

AOC DELTA (TWO ENTRIES)

- 1 Stephen Kwarter
- 2 Disqualified

BLACK DELTA (FOUR ENTRIES)

- 1 Tim Peters
- 2 Tim Peters
- 3 Tim Peters
- 4 Tim Peters

BLUE/GREEN B DELTA (THREE ENTRIES)

- 1 Mike and Kathy Slater
- 2 Mike and Kathy Slater
- 3 Mike and Kathy Slater
- 4 Mike and Kathy Slater

GOLD DELTA (FOUR ENTRIES)

- 1 All Entries Disqualified

H-B AOC DELTA (THREE ENTRIES)

- 1 Stephen Kwarter
- 2 Stephen Kwarter
- 3 M and M Golimowski

H-B AOC TANK (TWO ENTRIES)

- 1 Stephen Kwarter
- 2 Stephen Kwarter

H-B PASTEL DELTA (SEVEN ENTRIES)

- 1 Jim Alderson
- 2 Jim Alderson
- 3 Jim Alderson
- 4 Jim Alderson

H-B PASTEL TANK (SEVEN ENTRIES)

- 1 Jim Alderson
- 2 Stephen Swinkowski
- 3 Stephen Swinkowski
- 4 Jim Alderson

H-B RED DELTA (TWO ENTRIES)

- 1 Jim Alderson
- 2 Gary Long

H-B RED TANK (ONE ENTRY)

- 1 Gary Long

MULTI DELTA (SEVEN ENTRIES)

- 1 Dwight Parlon
- 2 Rusty Blader
- 3 Rusty Blader
- 4 Rusty Blader

RED DELTA (THREE ENTRIES)

- 1 Jim Alderson
- 2 Jim Alderson
- 3 Jim Alderson

RED TANK (THREE ENTRIES)

- 1 Jim Alderson
- 2 Jim Alderson
- 3 Jim Alderson

ANNUAL SHOW INFORMATION

LOCATION

HOLIDAY INN
3408 Argonne Road
Rolling Meadows, Illinois 60008
708 298-8000

ACCOMMODATIONS

Room reservations can be made directly with Holiday Inn, or through Shm Chalkerson, Holiday Inn's area sales manager. Holiday Inn offers a complete indoor recreational facility including exercise and game room, pool, sauna and whirlpool. Free bus and van transportation provided by hotel from O'Hare International Airport. Room rates start at \$80.00 plus tax per night.

SCHEDULE

FRIDAY, NOVEMBER 4, 1993
JUDGING SEMINAR
7:00PM

ENTRY REGISTRATION
3:00PM 7:00PM
HOSPITALITY ROOM
8:00PM

SATURDAY, NOVEMBER 5, 1993
ENTRY REGISTRATION
8:00AM 3:00PM
MEETING
10:00AM
JUDGING
3:00PM

AWARDS BANQUET
7:00PM 12:00AM

SUNDAY, NOVEMBER 6, 1993
GENERAL PUBLIC VIEWING
8:00AM 12:00PM
SILENT AUCTION AND RAFFLE
10:00AM 12:00PM
SHOW AWARDS PRESENTATION
11:00AM
DEBENCHING
12:00PM

SPECIAL EVENT

GUPPY ASSOCIATED INTERNATIONAL OF CHICAGO is having a chicken and pheasant buffet for \$28.00 per person with cash bar. The evening of Saturday, November 6, 1993. Live entertainment will be offered after Awards Presentation. Please notify Shm Chalkerson the number of tickets intended.

SHOW CHAIRPERSON

FRANK BARIS
8821 Wilmette Road
Downers Grove, Illinois 60518
708 662-8400

SHOW CO-CHAIRPERSON

MIKE GOLIMOWSKI
515 Johnson Avenue
Morton, Illinois 61550
815 942-8300

SHIPPED IN ENTRIES

STEVEN SYKOWSKI
8508 South Hobart Avenue
Chicago, Illinois 60629
312 736-7790

PRICING NOTIFICATION APPROPRIATED

Mailed in entries must be received no later than 4:00PM CST Friday, November 5, 1993. NO EXCEPTIONS. Only Air Mail. Express Mail, and Priority Mail shipments will be accepted. NO AIR FREIGHT SHIPMENTS ACCEPTED. Content postage must be included for all mail shipments.

OFFICIAL INTERNATIONAL FANCY GUPPY ASSOCIATION ACCUMULATIVE AWARD POINT TOTALS - THROUGH SEPTEMBER 20, 1993

DELTA CLASSES

BLUE	ADG	AOC BICOLORED	BLACK
1 Dwight Parson 740	1 Stephen Kewler 1020	1 Steve Wink 2160	1 Tim Peters 2440
2 Bill Klein 520	2 VanDerLangeberg 640	2 Michael Brenne 200	2 Karim Kammerer 20
3 Gene Gilmowski 240	3 Tyrone Burgess 80	3 Jim Jaku 160	
4 Mark & Pat Allen 200	4 Tom & Pat Allen 40		
BLUE	BLUE-GREEN BICOLORED	Bronze	GOLD
1 Jim Alderson 1240	1 Mike & Kathy Sailer 1060	1 Tom & Pat Allen 1300	VanDerLangeberg 1680
2 David Alexander 280	2 Dick & Ann Wagner 440	2 Dick & Ann Wagner 260	
3 Bob Schubel 120	3 Tyrone Burgess 200	3 Tyrone Burgess 80	
4 Tom & Pat Allen 80	4 Mike Sailer 200		
GREEN	HALF-BLACK AOC	HALF-BLACK BLUE	HALF-BLACK PASTEL
1 Jim Alderson 1400	1 Stephen Kewler 1000	1 Jim Alderson 900	1 Jim Alderson 1100
2 Jim Russell 800	2 Jim Alderson 200	2 Jerry Hollingsworth 560	2 Jim Russell 240
3 Tom & Pat Allen 200	3 M & M Gilmowski 80	3 Mike Sailer 400	3 John Wolf 300
4 Ron & Betty DeVries 40		4 Anthony Rodriguez 300	4 Steve Swadlow 280
HALF-BLACK PURPLE	HALF-BLACK RED	HALF-BLACK YELLOW	MULTI
1 Stephen Kewler 900	1 Gary Long 740	1 Gary Long 1280	1 Dwight Parson 1100
2 Jim & Brenda Thale 100	2 Thomas Joffe 420	2 Elyse & Marie Bryant 120	2 Rudy Shadel 460
	3 Glen Schubel 360	3 Gary Long 120	3 Jim Jaku 400
	4 Jim Alderson 280		4 Dennis Brown 180
PURPLE	RED	RED BICOLORED	SNAKE-SKIN SOLID
1 Gary Mousneau 1020	1 Gary Mousneau 1400	1 Bruce Jung 280	1 VanDerLangeberg 2080
2 Terry Wasylink 480	2 Jim Alderson 1000	2 Jim Jaku 200	2 Tyrone Burgess 220
3 M & M VanNieu 600		3 J P Richtmeyer 300	3 Jim Alderson 20
4 Gene Gilmowski 140		4 Rudy Shadel 200	4 Karim Kammerer 80
SNAKE-SKIN VARIATED	WHITE	UNION OVERALL	
1 Michael Brewer 1980	1 Steve Wink 2240	1 VanDerLangeberg 1680	
2 Bill Klein 200	2 Don Seurens 640	1 Andy Pouch 1600	
3 John Wolf 160	3 Stephen Kewler 480	2 Karim Gilmowski 600	
4 Karim Kammerer 80	4 Bob Rietzsch 480	3 Wendy Long 780	
		4 Elizabeth Pouch 240	

WELL CLASSES

BOOBYEYE COLOR	HALF-BLACK	SNAKE-SKIN	SOLID CAUDAL	VARIATED CAUDAL
1 Tom & Pat Allen 320	1 Jim & Brenda Thale 180	1 Bill Klein 480	1 Tom & Pat Allen 240	1 Steve Wink 220
2 Dwight Parson 280	2 Elyse & Marie Bryant 140	2 Jim Jaku 180	2 Jim Alderson 200	2 Jim Jaku 280
3 Gene Gilmowski 200	3 Jim Alderson 100	3 Michael Brewer 100	3 Jim & Brenda Thale 100	3 William Javorich 100
4 M & M Gilmowski 40	4 Gary Long 100		4 Gary Mousneau 100	4 Dennis Brown 80
	5 Gary Mousneau 100			
	6 Bob Skorton 900			

FEMALE CLASSES

ALBINO FEMALE	AOC FEMALE	BLUE-GREEN FEMALE	Bronze FEMALE
1 Gene Gilmowski 840	1 Michael Brewer 680	1 Tom Staggel 560	1 Tom & Pat Allen 580
2 M & M Gilmowski 120	2 M & M Gilmowski 160	2 Dan Whitmer 80	2 Gene Gilmowski 100
3 Dan Whitmer 80	3 Tom Staggel 80	3 Stan Schubel 80	2 Don Seurens 100
	4 John Wolf 40	4 Tom & Pat Allen 40	2 Dick & Ann Wagner 80
GOLD FEMALE	HALF-BLACK AOC FEMALE	HALF-BLACK RED FEMALE	RED FEMALE
1 Frank Barts 140	1 M & M Gilmowski 240	1 Frank Barts 180	2 Steve Swadlow 120
2 Steve Swadlow 100	2 John Wolf 180	2 Gary Long 80	2 Dan Whitmer 100
3 David Jell 100	3 Mark & Pam Lewis 140		3 Stan Schubel 100
	4 Elyse & Marie Bryant 100		4 M & M Gilmowski 100
			5 Elyse & Marie Bryant 100

GRAND OVERALL MALE

1 Jim Alderson 6240
2 Gary Mousneau 800
3 VanDerLangeberg 4620
4 Steve Wink 3800
5 Stephen Kewler 3520
6 Ted Peters 1840
7 Dwight Parson 1720
8 Tom & Pat Allen 1700
9 Michael Brewer 1640
10 John Wolf 1200

GRAND OVERALL FEMALE

1 Tom Staggel 1900
2 Michael Brewer 780
3 Gene Gilmowski 680
4 Jim & Brenda Thale 540
5 Tim Peters 520
6 John Wolf 420
7 Elyse & Marie Bryant 400
8 Michael O'Leary 380
9 Tom Wendenroeder 360
10 Tom & Pat Allen 340

BREEDER MALE

1 Jim Alderson 420
2 Gary Mousneau 300
3 Thomas Joffe 260
4 Stephen Kewler 180

BREEDER FEMALE

1 Tom Staggel 500
2 Tom Wendenroeder 480
3 David Jell 200
4 Michael Brewer 180

NOVICE OVERALL

1 Michael O'Leary 440
2 Tim Peters 220
3 Mike & Kathy Sailer 180
4 Bob Rietzsch 100

INTERNATIONAL FANCY GLUPPY ASSOCIATION CLEARING HOUSE

JIM ALDERSON
20935 Golden Springs Drive
Diamond Bar, California 91789
(letters only)

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3438 Ashby Road
St. Ann, Missouri 63073
314 426-8354

FRANK CHANG
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Yorba Linda, California 92687
714 895-8329

FRED FRAGASSO
407 East 65th Street
New York, New York 10028
(letters only)

BILL KLEIN
2907 South 57th Street
Milwaukee, Wisconsin 53218
414 672-6004

STEPHEN KWARTLER
1847 Mulholland Avenue
Glenview, New York 0452
203-244-1111

JIM RUSSELL
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Brockton, Massachusetts 01940
508 588-7924

STAN SHUBEL
87 S. Madden Lake Drive
Howell, Michigan 48843
817 548-4041

FERRY WASYLINK
834 Deer Creek Run
Columbia, Ohio 44410

DISCLAIMER All exchanges are strictly between buyer and seller. The International Fancy Guppy Association, Pan Pacific Guppy Association and Guppy Novice Association assume no responsibility for any transactions. I suggest those seeking championship breeding stock rely on show results and good performance of participating breeders.

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Congratulations to Paul Gorski upon his first spawning of discus. After years of hard work and thousands of dollars spent, he now has young discus fry.

From Your Friends

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RELENTLESS PURSUIT OF NEW MEMBERS

By: Davidene Tait
Pan Pacific Guppy Association
Newsletter Editor/Publisher

The Pan Pacific Guppy Association's relentless pursuit of new club members continues. Our objectives are motivated by our intense commitment to promoting the advancement, enjoyment, knowledge and pleasure of breeding show quality fancy guppies. Our club now proudly boasts over sixty guppy enthusiasts throughout Southern California. We would appreciate thoughtful suggestions from club members concerning measures that should be implemented to enable us to accomplish our lofty goals.

Although *Guppy Roundtable* was recently designated the official monthly publication of the International Fancy Guppy Association, our club has retained publication credit for the newsletter. Two pages of each issue of *Guppy Roundtable* will be entitled "Pan Pacific Guppy Association News Section". Therefore, now more than ever, compositions authored by our club members are of paramount importance if we are to maintain the reputable quality of our publication. Your experiences (humorous and serious) will enable *Guppy Roundtable* to continue as the most effective forum for guppy breeders to promote the enjoyment and knowledge of our little friend, the guppy.

Club member's suggestions on how to improve the content, design, format, layout or quality of our monthly publication are urgently needed. A tremendous response was received from an advertisement regarding the Pan Pacific Guppy Association and *Guppy Roundtable* appearing in The Society Page of the September 1993 issue of *Tropical Fish Hobbyist*. Over fifty complimentary copies of

Guppy Roundtable were forwarded to guppy enthusiasts expressing interest in our newsletter. Unfortunately, as of the date herein, an insignificant number of inquirers have subsequently subscribed to *Guppy Roundtable*. Why? What is this publication lacking?? What needs to be added, changed or deleted??? Do not be shy about sharing your creative talents with the publication staff; your ideas are enthusiastically welcomed and greatly appreciated.

This is YOUR club and publication and their continued growth and success hinges on your support. Concerning written contributions for publication in our newsletter, you do not need to be a perfect writer. Craig Smith has graciously answered this editor's plea for help and recently volunteered his proofreading skills as Verification Director of *Guppy Roundtable*. This additional step to the monthly publication process of *Guppy Roundtable* will ensure the elimination of unsightly typographical errors that occasionally escaped the ever watchful eye of the editor.

Andy Sweetenry has taken pity on the poor soul of the newsletter editor and gallantly volunteered his talents as Distribution Director of *Guppy Roundtable*. This chivalrous act will ensure the timely delivery of our publication to all subscribers, both near and far.

A special note of appreciation is extended to Bruce Jung who magnanimously accepted his nomination of Advertising Director for *Guppy Roundtable*. This most important position is the key to implementing many of the exciting ideas currently on the drawing board for future issues of our newsletter. Unfortunately, many of these changes are costly. Therefore, to implement the envisioned massive overhaul of our publication, and avoid bankrupting our club treasury in the process, we

Pan Pacific Guppy Association
Club Officers

PRESIDENT
JIM ALDERSON
20035 Golden Springs Drive
Walnut, California 91780
909 584-4233

VICE PRESIDENT
DAVID WEXLER
11497 Biona Drive
Los Angeles, California 90065
310 390-4714

TREASURER
RON HONGO
483 Via del Verde
Montebello, California 90640
213 728-0544

AWARD POINTS CHAIRPERSON
ANN RODRIGUEZ
1805 Canyon Way
Van Nuys, California 91404
805 694-5024

CLUB CONTACT CHAIRPERSON
DENNIS BROWN
3742 Jasmine Avenue
Los Angeles, California 90034
310 555-0946

need to significantly increase the monthly advertising sold for *Guppy Roundtable*.

Regarding club promotion, the recently created position of Publicity Chairperson for the Pan Pacific Guppy Association seeks an energetic club member willing to devote approximately two hours per month to place advertisements in various publications to advance our club and newsletter. Anyone interested in assuming responsibility for this position should contact Jim Alderson or Davidene Tait for further details.

A final word of "thanks" to our anonymous, mysterious benefactor who placed the excellent advertisement in The Society Page of the September 1993 issue of *Tropical Fish Hobbyist* regarding *Guppy Roundtable* and the Pan Pacific Guppy Association. The response to your fabulous announcement was truly overwhelming.

OCTOBER MEETING:
WHAT AN AUCTION!

By: Don Kawano
Secretary
Pan Pacific Guppy Association

The October 10, 1993 meeting of the Pan Pacific Guppy Association at West Covina Lanes proved exciting and informative. The meeting had three separate yet connected events: Club business, our auction, and our bowl show. We spent much of our club business time discussing *Guppy Roundtable* and several needs were brought to the attention of all club members. First, because of the increased load on the Roundtable publication and distribution staff, we found it necessary to have an Advertising Director. Bruce Jung will serve in that position. Secondly, we were made aware of the need for our members to write more articles. "Let's give it a try!" Finally, a fairly lengthy discussion centered on the nuts and bolts of subscriptions, mail costs, keeping everything up to date, and improving the publication.

After a short break, auction fish and items were put on display for the perusal of those in attendance. What made this auction so much fun was that everything from Cichlids, Discus, Marbled Angels, brine shrimp eggs, aquarium management computer software programs, fish food, medicines, pond plants, porcelain

fish models, water conditioners, and a huge power filter were auctioned. The guppy strains available were Blues, Blue/Green Bicolors, Greens, Half-Black AOC's, Half-Black Blues, Half-Black Pastels, Half-Black Reds, Purples, Reds and Red Bicolors. Every auction seems to have different strains and different items up for bid. What will the December meeting bring?

The meeting concluded with our bowl show. The results were as follows:

MALE

1st: Elaine Poy (Blue/Green Bicolor)
2nd: Ron Hongo (Half-Black Pastel)
3rd: Davidene Tait (Blue)

FEMALE

1st: Davidene Tait (Blue)
2nd: Don Kawano (Half-Black AOC)

A thanks to all the members who donated fish, plants, and art work for auction, and please support the companies who donated food, medicine and equipment. See you at the December 12, 1993 "Annual Potluck Dinner" at Dave Wexler's. Bring some food, a healthy appetite, your fish and your checkbook.....P.S. The auction is not restricted to club members only, but a free trio of your choice is available upon joining and attending our meetings.

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Pan Pacific Guppy

Association

MEETING SCHEDULE

DECEMBER 12, 1993 - 5:00PM
ANNUAL POTLUCK DINNER
David Wexler's Residence
11497 Biona Drive
Los Angeles, California 90065
310 390-4714

DIRECTIONS: Santa Monica Freeway East (10) to Overland Avenue exit. Turn left off freeway off ramp onto Overland Avenue. Overland Avenue to Venice Boulevard and turn right. Venice Boulevard to Sawtelle Boulevard and turn right. Sawtelle Boulevard to Biona Drive and turn left. Proceed on Biona Drive to end of cul-de-sac. Or, Santa Monica Freeway West (10) to the National Boulevard/Overland Avenue exit. Turn right off freeway off ramp onto National Boulevard. National Boulevard to Overland Avenue and turn left. Overland Avenue to Venice Boulevard and turn right. Venice Boulevard to Sawtelle Boulevard and turn right. Sawtelle Boulevard to Biona Drive and turn left. Proceed on Biona Drive to end of cul-de-sac.

JANUARY 8, 1994 - 2:00pm
West Covina Lanes
Banquet Rooms
876 South Glendora Avenue
West Covina, California 91788
618 960-3636

DIRECTIONS: Santa Monica Freeway East (10) to San Bernardino Freeway (10) to Vincent Avenue exit. Vincent Avenue to Glendora Avenue and turn right into parking lot of West Covina Lanes.

GUPPY ROUNDTABLE

YOUR GUIDE TO SUCCESSFUL GUPPY BREEDING

- Are you thinking of breeding fancy guppies, but do not know how to choose the right equipment?
- When problems develop in your guppy aquariums, are you confused and frustrated by sources of conflicting information?
- Are you curious about the latest techniques, technology, and trends of breeding fancy guppies?

Whether you are a novice or an advanced breeder of fancy guppies, the informative Guppy Roundtable will guide you every step of the way in starting, improving, and maintaining your guppy breeding regimen. Conversant hobbyists discuss everything from ensuring the health of your guppies, to hatching brine shrimp eggs, to the pros and cons of various types of filtration systems, to the complexities of guppy genetics. Share the secrets of the world's most successful guppy breeders, and much more!

Subscribe now and enjoy the science of guppy breeding.

Every issue of Guppy Roundtable, the official monthly publication of the International Fancy Guppy Association, has facts and information you will not want to miss. Delight your friends with authoritative information from Guppy Roundtable written by the experts in breeding award winning guppies. You will gain more knowledge and pleasure from your guppies with your very first issue of Guppy Roundtable.

ANNUAL SUBSCRIPTION RATE: \$26.00
FOREIGN COUNTRY ANNUAL SUBSCRIPTION RATE: \$34.00

GUPPY ROUNDTABLE SUBSCRIPTION APPLICATION

Please make all checks or money orders payable to:

Davidene Tait
Pan Pacific Guppy Association
3819 Mantone Avenue
Los Angeles, California 90034

NAME: _____

STREET ADDRESS: _____

CITY: _____

STATE: _____

ZIP CODE: _____ TELEPHONE: _____

☐ One Year Subscription _____

☐ Volume One Back Issues _____

☐ Total Payment Enclosed _____

*Please Note: Single copies of back issues of Guppy Roundtable are no longer available. First twelve issues are now available in a volume bound edition for \$20.00 United States/\$24.00 Foreign Countries (price includes all handling, shipping and postage charges).

ANNUAL SUBSCRIPTION \$26.00 FOREIGN COUNTRY ANNUAL SUBSCRIPTION \$34.00

ADVERTISING RATES

FOR

Guppy Roundtable

ONE MONTH

Eighth Page Advertisement 5.00

Quarter Page Advertisement 10.00

Half Page Advertisement 20.00

Full Page Advertisement 40.00

THREE CONSECUTIVE MONTHS

Eighth Page Advertisement 15.00

Quarter Page Advertisement 25.00

Half Page Advertisement 50.00

Full Page Advertisement 100.00

SIX CONSECUTIVE MONTHS

Eighth Page Advertisement 30.00

Quarter Page Advertisement 45.00

Half Page Advertisement 90.00

Full Page Advertisement 180.00

TWELVE CONSECUTIVE MONTHS

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Quarter Page Advertisement 95.00

Half Page Advertisement 185.00

Full Page Advertisement 375.00

(PLEASE NOTE: SMALLER DIMENSIONAL AD RATES AVAILABLE UPON REQUEST)

All advertisement orders will be invoiced immediately upon receipt of advertisement copy with payment due thirty days from receipt of invoice. The Pan Pacific Guppy Association reserves the right to refuse to publish any inappropriate advertisements. Submission of an advertisement does not constitute a commitment by the Pan Pacific Guppy Association to publish the advertisement copy.

Mail Ad Copy Instructions To:

Davidene Tait
Newsletter Editor/Publisher
Pan Pacific Guppy Association
3819 Mantone Avenue
Los Angeles, California 90034

GUPPY ROUNDTABLE

THE OFFICIAL MONTHLY PUBLICATION OF THE

INTERNATIONAL FANCY GUPPY ASSOCIATION

VOLUME 1 ISSUE VI

PUBLISHED BY THE PAN PACIFIC GUPPY ASSOCIATION

DECEMBER 1993

RAISING GREAT GUPPIES: HALF-BLACK REDS

PART THREE

By Jim Anderson, D.V.M., President
Pan Pacific Guppy Association
International Fancy Guppy Association

A nice tank of Half-Black Red guppies are some of the most striking fish around. In their best form, they have a jet black body with a matching fire engine red caudal and dorsal. Ideally they would also have red in front of the half-black on the head. I have never seen a perfect half-black red like this, but I am sure someone will produce one in the future.

Half-Black Reds are a genetic challenge. They present several problems to the serious guppy breeder.

1. Keeping the Half-Black in the body very dark.

2. Developing a line that grows a long cauda.

3. Keeping the red color pure without black overtones.

4. Keeping the red close to red not orange.

5. Producing males with a pleasing body shape (many of the Half-Black Reds have a torpedo shaped body with no waistline).

In the Half-Black Red line, have

raised the black body color is located on the "X" chromosome. Thus, it is very important to use females with the very darkest body color to produce dark body color in the male. The males inherit their Half-Black color entirely from the females. I have repeatedly proven this by breeding a gold Red male (not half-black) to a Half-Black Red female (genetic grey). The offspring are without fail one hundred percent genetic grey bodied Half-Black Reds. This places the Half-Black body color on the female "X" chromosome and it is a dominant trait. Never use a gold bodied Half-Black Red female for breeding as this will dilute the Half-Black body color in the male offspring.

Unfortunately, the caudal tends to get shorter and shorter on Half-Black Reds if you continually inbreed or line breed them. I outcross my genetic grey Half-Black Red females to my gold Reds with the very long caudals about every third generation. This not only enhances the caudal length, it also will clean up the caudal and dorsal color as well. The more you breed for the good dark body color the more the black tends to bleed into the caudal. The F1 offspring from the Red Half-Black Red cross will show some improvement, but the significant improvement will be seen in the F2.

Body shape can definitely be a major problem in the Half-Black Red line of guppies. The females tend to become too elongated and they have a rounded almost ube shaped body. Again the solution is to outcross to a good Red line of guppies. I have found that sometimes the gold Reds can share some body shape problems with the Half-Black Reds. In general, the grey Reds will have good body shape. A grey Red crossed into a genetic grey Half-Black Red will usually produce some very well formed fish. Some of these offspring will have black in the caudal or dorsal. The best males should be bred back to pure Half-Black Red females.

In summary, it is very difficult to breed Half-Black Reds as a pure line and keep all these factors under control. Furthermore, some lines of Reds do not cross well with Half-Black Reds. I will cross the pure genetic grey Half-Black Reds through Reds every second or third generation. Sometimes I will cross them with two different Red lines to see which out cross produces the best offspring and then go from there.

In next month's issue of Guppy Roundtable, we will look at how to pick the best Half-Black Red females.

INSIDE THIS ISSUE

- 3 A FRESH NEW START**
By Stephen Kwartler
Analysis of what ails today's show guppies and proposal to attack problem at source
- 4 GUPPY NOTES**
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GUPPY ROUNDTABLE

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A FRESH NEW START

By Stephen Kwartler
Bronx Guppy Club
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Well the annual is behind us, congratulations to those who did well. Now it is time we address the problem our guppies are facing with this so called "disease"

First we must recognize that whether this is a bacteria or a virus, it has become a severe problem affecting us all. The Asian guppy breeder is experiencing similar problems. They are now banned from exporting guppies from several ports. They feel that the problem they face is caused by contamination to the local waters, and this has introduced a bacteria into their fresh water supply. It may be possible, but the problem has reached those who have not introduced new fish in their rooms for years.

I understand it could have been transmitted from show to show due to the splashing of water or moving of the fish, but fear this goes beyond that. I know that some breeders have come up with their own diagnostic research and have written articles explaining elaborate with all sorts of remedies. Yet after all is tried, the problem reappears.

seen several fish rooms in different areas of the country that have similar symptoms and only temporary luck with treatment. Yet other breeders get a minor outbreak and are able to rid their fish of the problem. So, I have come to my own conclusion as to a cause and cure.

There is one area we have not addressed, and that is the lineage of all our guppies. In the early development of the guppy, those involved relied on each other to introduce new "blood" into their strains. By doing this they were constantly avoiding the severity of inbreeding their strains. Since then, with the purification of many colors and tail shapes we have neglected to re-introduce new "blood" back into our breeding stock.

Have we inadvertently created a laboratory animal that has become genetically altered and no longer resistant to common conditions in its environment? Have we caused the guppy gene pool to become too fragile? It may be possible that since the show guppy has become so removed from its own origin and no longer can make its own natural selection.

among its species, it may well have become more problematic than we realize.

Now I am not suggesting we all go out and introduce feeder guppies into our strains. Similar conditions occur in the development of many livestock, and research has shown that by breeding to unrelated stock the strain becomes stronger. I am not a geneticist, but have been involved in breeding guppies and keeping records for many years. After listening to many breeders reading many articles, and doing my own research, I must rely on gut feeling.

So here is my plan. Over the next several months those guppy breeders who have been affected by this problem should try contacting other breeders with similar strains that are not closely related. Then exchange fish with the purpose of making an outcross. Hopefully this outcross will strengthen the line with minimal loss in quality. By crossing back the F1 to the original strain you may well be on your way to producing healthier guppies.

Remember this problem has effected many of us. If you have been lucky so far and have no signs of any problem it could be a matter of time.

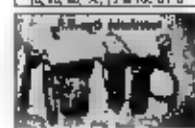
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GUPPY NOTES

By Dr. Eugene C. Larr
 Editor of Guppy Roundtable May 1978

There is a rumor I am going to discuss the problem of blue and purple. Maybe should make a few comments about that. What color is my shirt? What color are my slacks? What color is this notebook? There are some twenty-two recognized colors of blue and over thirty of purple. If they were all strung out on color cards and we had a hundred international Fancy Guppy Association judges and we cut out small dots from all of the color cards and asked the judges to put the dots in piles of blue and purple, guess what it would look like.

I will leave that up to you people who have to judge international Fancy Guppy Association standards for blue and purple in my opinion, we should put them together and save hard feelings and problems. Nevertheless you have people who love blue and who love purple and now we have lavender. What is the difference between purple and lavender? Why do we get into the argument, is it fuscia? Is it orchid? I think we could add about twenty more divisions to these

color classes. But let's get down to something we can do something about.

I want to speak out on not only how you go about conducting a test, but how you are going to get information that is meaningful from that test. I am asked to evaluate test results, either of my own assistants who are spread everywhere from here to the University of Denver as well as test results from amateurs. And there are three main things which will shoot a test down.

1. Improper observation.
2. Insufficient numbers of fish in the test.
3. Not testing for a long enough period of time.

The first problem is improper observation on your part. Remember you are looking at these fish, you are arriving at a decision, it has to be carefully done. Under this can fall three sub-categories.

The first one of these is not recording your culis. I have gone



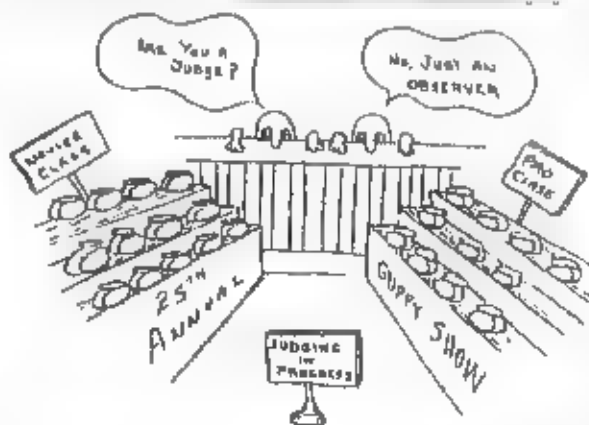
Submitted by Steven Swatowish

to fishrooms, in fact just this last summer was visiting a very prominent guppy grower back in the middle eastern states, and I was looking at a "pure" strain of blues. I noticed he was busily fishing fish out of the tanks that had spots in their tails, asked him what he was doing. He said "Oh, these are culis. There's no good." Well, I asked him how many culis he threw out. He did not remember. He just threw them out when they showed they were not pure blue. Please think about this when you are culling or classifying your fish. If you are establishing a pure strain by definition we mean a pure strain. This means you are not going to have to cull for color. All of the males must be alike as far as color is concerned, otherwise it is not a pure strain of a particular color. There are probably only about fourteen strains that have lists on that are pure color strains. Most all of the others show tremendous genetic segregation. So be careful when you record your results. You must record your culis and what you culled them for.

Another big error of observation that many, especially amateurs, made is that they forget to keep their records up to date. About the most horrible thing you can do is

Submitted by Steven Swatowish

(continued on page five)



to examine your fish today and two or three days later remember you forgot to put something in your notes, so you go back and try to record it from memory. You cannot do it. And never erase anything from your records. If you later feel it should have been evaluated in a different way, simply cross out and write in the new evaluation. Do not throw out that original observation. It might be of extreme importance.

One habit that all of us have and nobody wants to admit is delusion. It is so easy to look at your tank and say "Oh, I have a hundred super blue delta guppies." Then, you start picking them out and you find well, that one is not quite as good as thought, and neither is that one. Suddenly show time comes and you decide you really do not have a single fish that is worth taking to the show. That was because of delusion. Do not get into that trap. Only you can keep yourself out of it. As I say it takes a real firm grip on your imagination to see a fish as it really is, not as you think it might be generations from now or maybe when it grows up a little. Look at it just as it is.

Another common failing in testing, especially in testing genetics, is using an insufficient number of fish for the test. This has shot down more genetic studies than any other single factor. Remember when you are doing a genetic test you must have a test group and a control group. And please, try to have at least one hundred males from the same cross before you even start guessing about what is going on genetically. In all the genetic tests we have done, we have tried to go to five hundred male fish. If you wanted to really pay attention to the science of genetics itself, you should only evaluate genetic traits on about forty thousand fish. Now, of course that is impractical under most conditions, if only because no female is going to live long enough to do it. We have found, however, that if you drop below one hundred you are in real trouble and at five

hundred we got results that could be duplicated. So somewhere between one hundred and five hundred is the bracket to work in.

On many other kinds of tests, the third failing that usually knocks down work is not testing for a long enough period of time. You must carry all feeding tests through two generations. You must carry all genetic tests through from three to six generations. The biggest pitfall here is jumping to a conclusion before the test is finished and stopping the test. This can be a very big mistake. I argued with a gentleman extensively one time when he said he had a pair of fish and the female dropped some fifty babies, but the next time she dropped the babies turned out to be quite different from the first litter. So I said "What did she drop the next time?" He said "Oh, I threw her out. She was obviously no good." Well, that guppy had a chance of producing who knows how many thousand genetic combinations in a single litter. That little female had not changed her genetics, segregation had simply taken place along genetic rules. If he had saved them, so we could count them and plot them on a curve, we could have found out what she was really doing.

I am going to digress here for a moment and talk some more about culling. This is probably one of the biggest mistakes that amateur and professional breeders both make. They cull their fish too young before they know what the fish really look like. Many breeders will tell you that the slow-growing males turn out to be the most spectacular. As a generally, this is nonsense. I have even heard and it was quoted in one of the guppy magazines, that you should never keep more than twelve of a litter. That is pure stupidity. That is like saying that, if you are going to have six children, let's kill all but the first two. But people will not look at it that way. They say the first six or eight or twelve (or whatever figure

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Guppy Swap Shop

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they want to use) are the strongest because they were closer to the sperm. It does not take much zoology or biology to know that is absolutely wrong. So, please do not do it. Save all of your fry, segregate them as early as you can if you are interested in virgin females and raise them all to maturity.

How many of you, now be truthful and I will raise my hand first, have at home a tank you call your cull tank into which you throw miscellaneous babies? And, four months later there is the most beautiful fish you ever saw in your fishroom. In your cull tank. Now you have a big problem. Which of the twenty tanks did he come out of? Well, do not do that. I know it takes a lot of room, it takes much space to raise all the young in a culler but you really must do it.

Some people will cull out baby males from a delta strain because they do not have a particular shape round tail when they are babies in a particular purple strain that know of this is true. The best delta males will have tails shaped like round buttons when they are babies. So maybe you could cull that strain this way but unless you know your strain very very well do not do it.

Now, let's get back to the problems you bring upon yourself when you do not continue a test for a long enough period of time. Let's take this business of making feeding tests. Let's say you found, or have dreamed up, a new guppy food incidentally, and am digressing again but we have dreamed up a new food that looks like it is going to be a super one. You all know my earthworm mixture, where you stuff a blender full of earthworms and turn it on. It's a mess to make. (For you married men do not let your wife catch you doing this in the kitchen blender.) With this new combination you have an even bigger problem. You all know the little mealworm, a brownish worm with a hard cover inside of that little mealworm is an almost perfect

balance of enzymes. It is an almost perfect combination. So, all you have to do is cut off their heads, squeeze their insides out and add this to the earthworm mixture. We found an even better way to do it is to fill the mealworm lengthwise, open him up and scrape the insides out. Some of the connective tissue inside the mealworm seems to be very vital. do not know how we can mass produce this but it is making some very phenomenal growth. I feed my fish three times a day and I now have fish that are almost twice as big as they should be after feeding them this earthworm-mealworm mixture. It is a headache to make but it is doing something that they like.

Okay, how are you going to test a food? In order to test this earthworm and mealworm mixture I chose a particular strain that I have simply because the females drop lots of babies. Let a female drop two litters, which gave me over two hundred fish. After they got used to eating ordinary brine shrimp, I divided them in half and put them into two twenty gallon tanks. One tank was then fed the ordinary diet which is earthworms, beef heart, and a combination of several dry foods, three times a day. The test group was also fed three times a day the same as the control group.

You keep doing this and go, and go and go, and do not cheat and do not forget. Keep the two groups separate so you do not end up feeding the wrong group. Make sure the test tank and the control tank are setting at the same level in the fish room. Make sure both tanks get exactly the same amount of fresh water when you change water. Make sure they both have the same amount of plants (if planted) make sure they receive the same amount of light. All of these things enter into it. You raise these up until they are mature, and then breed every female from both the test tank and the control tank, count all of the fry from all of the females to see if there are a greater number of fry from the females fed on the new

food. If so, it is a good indication that you have a good new food.

On a feeding test you should carry even one step further. have received only a single report from Dr. Edward's in Germany where testing was carried to the F2 generation continuing with the same food. This is extremely important because while the mother fish carrying the young is eating the new food, you might have added something that would affect the babies. So you have to go through the F2 generation, raise them up, and see what they look like. That is where the deficiencies will show up.

I am very suspicious of the unusual, sudden disappearance of strains when they are fed a certain food. Maybe only one food or a couple of foods and suddenly it is noticed that fertility is falling off at an alarming rate.

If you are outcrossing to produce your show fish, and you are certainly going to feed these show fish more than three times a day and you are going to have the temperature higher and all of that generally you do not care if those show fish are fertile or not. You are going to be raising the males to make them as big and heavy as possible. I would certainly recommend this new food mixture for that. Even as far as we have gone the results are quite spectacular. I do not know as yet its effects on the females or on the females young. We will not know that for about another six months.

When you see a new food on the market do not take it home and sprinkle it in your tanks and say "Yes, the fish look bigger than they did" because you do not really know. am not being critical but even if you know your strain very well, do not jump to these conclusions.

How do you know my fish are bigger?

(Continued on page seven.)

than their comparison tank? I know because we measure them. We take them out of the tank, we hold them on a millimeter board and we see how long they are. You would be surprised, after you have measured the same fish about eight or ten times he gets quite used to being measured. I do not know if he realizes what is going on but the first two or three times you catch him and lay him on the millimeter board he flaps around and has a gay time. But after eight or ten times he lies very still, holds his breath, closes down his gill covers and just waits until you make a note of the length and plopp him back into the tank.

So, when I say that the fish in the test tank to which a new food is being given are larger than the control tank, I can say this because they are two and a half millimeters longer. Two and a half millimeters sounds small, but you would be surprised how much bigger they look. But you have to measure them to know for sure.

We are also running rates of growth curves on this new food. For instance, what do you look for in a food? Rate of growth, age at maturity, how fast they go into old age, how soon they die. These are very critical figures. You should keep careful notes on these things for your records. Write it down!

If you have a strain of fish that has been fed a certain food, and they reach maturity at fourteen months and by eighteen months their tails are all shot. Try something else. Possibly the food they are getting is not enough to sustain them that much longer. am very concerned, for instance, with the green strains which are notorious for having small numbers of young. I think we have some interesting things to explore here and it is something all of you can do. These kinds of experiments on feeding really need to be done.

When you see an ad that a fish has been fed such-and-such food and became the grand champion at

the Berlin show well, you and both know that fish was not fed just that one food. He was fed a lot of other things. It would not take you long to find out, if you fed your fish just this one food, that something else is needed. The beginner does not know this.

Right here might tell you about another little test we have been doing. Remember the comments in some of the local papers about feeding of marigolds to chickens to make their skin more yellow so they would look better in the market? It works with puppies too. You can change them anywhere from yellow to a deep, almost maroon, orange that some marigold flowers have. This shows up most obviously when using albinos. You have one major problem however. Some puppies simply do not like marigolds. They will not eat it. Using six males and five females from an albino strain, started feeding them air-dried

marigold flower petals along with their dry food. They would not eat it. So only fed them twice a day and then offered the marigolds again, they still would not eat it. So did not feed them at all for three whole days, then offered the marigolds and then they ate it. So you sometimes have to go through the back door to do some of these feeding tests.

The yellow color from feeding marigold petals seems to last quite a long time, so beware. If you see a female albino with a bright orange dorsal and caudal (the change in body color is minimal) be suspicious that someone has been using chemistry instead of genetics. If you want to try it, plant marigolds now. When they bloom, pull the petals off, put the little white lip off the bottom of each petal, let the colored part dry in the sun, scrunch this up into very small bits and feed it to your

(continued on page eight)

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guppies. If you have a strain that likes marigolds, they will color up quite fast. If your strain does not like it, you will have to starve them, to it.

Question from the audience:
"I have red fish. Do I have to go home and plant red marigolds?"

There are not any red marigolds, so you would have to feed your red fish paprika or something very high in carotene, not carrot juice, but carotene.

Question from the audience:
"Won't carotene turn red fish brown?"

It depends on which you are using. There is carotene A and carotene B. Carotene B will make them kind of a burnt orange.

Question from the audience:

"Is carotene the main ingredient in High Glo 30?"

I think they are also putting in the carotene that comes from the shells of shrimp. Those seafoods that turn pink when cooked are high in carotene, carotene A. That is the one you would like to get your red guppies to eat, but in the case of the shrimp, it is locked up and the guppy can not do much with it until it is broken down chemically. Just like when you read the label of a food can showing so much protein, it depends on which protein it is. You have all seen that silly shampoo commercial about your hair being protein. Believe me, if you chop up hair and feed it to your guppies they will starve to death. Even though hair is protein, there is no way for them to get it out. This is where you get into the problems of advertising and/or false advertising. You have to try these

things yourself, but give them a real try. Do not come to any conclusion after a few feedings.

Now let's take one of the genetic ones. You are all raising wide-tailed guppies, and you all cull rather indiscriminately. Do not do that. Do not cull any fish until he is mature. We'll tell you a real special reason why. This little curve is called a bell curve. In this example we have the number of fish on the vertical axis and caudal width on the horizontal axis.

For each litter of your wide-tailed guppies you should draw a chart like this. And you should be very critical. You are the observer. You are the only one that can do it. The important thing you want to watch generation to generation, is which way the bell curve is moving. Are you getting more or less males in

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each generation with really wide tails?

All of you have raised wide-tail strains, and maybe five or six in a litter were spectacular. So you threw out the others. Well, those five or six super deltas represent just a little piece of your bell curve. Meanwhile, all the rest of the curve is in the genetic background of your super fish. If you chart your fish generation after generation and begin to notice that your bell curve is moving to the left, showing smaller numbers of fish with extra wide tails, you are in trouble. If the peak of your bell curve is moving to the right, great, you are doing the right thing. Unfortunately there is no way to guess about this. If you look at a whole tank of fish, you will see all kinds of tail widths. Maybe you guess that half of them are good and about half are not wide enough. But this sort of guessing does not tell you until much too late that your strain may not be producing as many widedails as it did before.

You can do the same thing for dorsals. A lot of people do have trouble getting and keeping good dorsals. With every single male fish, when he is mature, plot your bell curve with dorsal ratio or dorsal length, whichever you are working for. I have known people to start with a strain that had a very fine dorsal, a swordtail strain. For instance, that had a dorsal almost as long as the caudal fin. They thought they could estimate their breeding results, but suddenly they had lost their beautiful long dorsal. It did not happen suddenly at all. It happened while they were not paying close enough attention. The bell curve will enable you to spot this sort of thing while it can be corrected.

There are three ways of breeding guppies: siblings, line crosses and outcrosses. Keep careful records on outcrosses. Remember outcrosses should be made in both directions whenever you can do it. Male male from strain X to female

from strain B, and male from strain B to female from strain X. Because you do not know from which direction you are going to get the better combination.

Sibling crosses are mating brother to sister. As I am sure you are all aware, though I am amazed at how many mistaken ideas are floating around. If you mate a female and get a litter of dead fish, and about a month later you get another litter from the same parents, both litters are still the F generation. You designate these litters as F1L, F1L2, etc. They are all brothers and sisters even if they might be born a year apart.

In line breeding you mate an original, say (male and female), then mate two sets from the F1 generation and keep breeding brother X sister in two lines, which, as they move away from each other in distance, become more and more unrelated.

I think the misunderstanding that is most fascinating, and I never really dawned on me that people would misinterpret it, is the half-sibling relationship. Let's say you have a male fish that you bought at a show auction and you want to mate this male to something. To keep this clear in your mind we will call him Jack, and the two females you are going to mate him to Jill and Dorothy. So you put Jack with Jill and Dorothy and they both have babies. What is the relationship between Jill's babies and Dorothy's babies? The two litters are half brothers and half sisters to each other. Both had different mothers but the same father. Many books call this a cousin relationship, but of course it is not.

To make cousins you have to get Jack's brother, we will call him Hal. If you mate Jack to Jill and Hal to Dorothy, now the resulting litters will be cousins to each other. The only reason I am making such a point of this is that it is important to realize that both litters from the Jack-Jill and Jack-Dorothy combinations are amplifying the

traits of the male Jack. If you then cross these two, you are mating half brother to half sister and recombining the traits of the one male. You will be surprised what you can do with this sort of thing.

I have been raising guppies for a long, long time. I have frozen in little blocks of ice guppies that were really spectacular back in 1946. You begin to really understand the comment you hear at every guppy show. An older person will say "Are those really guppies?" They remember the little short gray-bodied fish with blue and red dots that we have been working on so very, very hard.

I am sure you have all been following the discussion on swordtail genetics that has been going on in the International Fancy Guppy Association Journal. We have an acute problem there. I know part of the problem. One of the basic tests to check a Y-linked trait is to outcross to a strain that does not have the trait in question. In other words, if I have a swordtail male and outcross him to a female from a wild gray strain that has had a round clear tail for eighteen generations and this cross throws no swordtails, then the swordtail trait is not on the Y chromosome. If this cross throws all swordtails then the swordtail is on the Y. But can you imagine testing for a swordtail Y-linked trait by crossing to a swordtail female? All veils and all deltas have swordtail traits. So if you outcross any veil or delta to a wild gray, you will get swordtails: top, bottom and double. When you make an outcross to test for a genetic trait make it to a fish that does not have the trait you are investigating, one that does not have it at all.

You folks probably are not doing many of these outcrosses. Not many of you will take your pretty show fish and mate him to a crazy little wild fish only an inch long with a clear tail. But if you did, you and up knowing a lot more about genetics, and you would have a great deal more appreciation for how complex that fancy fish really is.

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FILTERS THAT DO, FILTERS THAT DO NOT

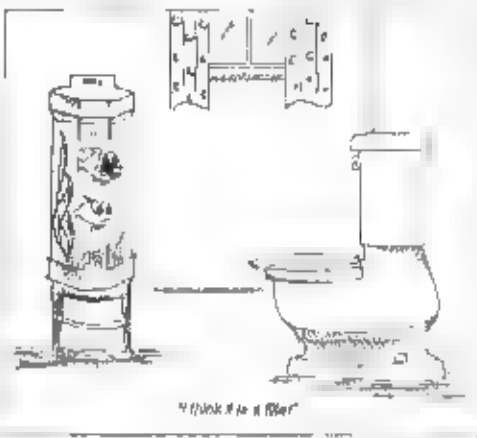
By Robert Fisher
Ontario Aquarium Society

One of the areas in the fish keeping hobby where the inventive genius of hobbyists and manufacturers really excels is in the field of aquarium filters. In the past few years, many weird and wonderful ideas have been demonstrated, some good and some not so good. Almost every time one picks up an "aquarist type" magazine or journal one sees advertisements for some new gadget "Guaranteed to be the best filter ever!"

As the name implies the basic function of an aquarium filter is to filter the water, clear of debris and refuse. Secondary functions are aeration and circulation. A good filter is one which performs all three functions satisfactorily. Healthy fish demand adequate filtration of their tank water to maintain health and vigor. The fast, convenient and essential

removal of feces and wastes by a good filter are indispensable, especially when attempting to raise prize winning, fancy guppies. One cannot afford to be a purist and attempt to raise fancy guppies "nature's way" as some would advocate. It just is not done. The filter is a most essential part of the guppy breeding tank set up. My experience has been that whenever one has trouble keeping tanks clean it is usually because of inadequate filtration, thus it is essential to have a filter to begin with, second it is also essential that the filter is large enough to handle the job involved.

Most aquarium filters are air



operated and utilize the principle of a stream or flow of air bubbles to draw or lift water through the filter medium extracting solid wastes in the process. The filter medium is normally a combination of charcoal and glasswool, gravel and glasswool, or peatmoss, etc. Polyurethane plastic foam has been utilized also. The advantage of operating filters with air bubbles is that the motion created by the air as it is pushed to the water's surface releases dissolved carbon dioxide and permits the replacement absorption of oxygen by the water, thus the air bubbles serve a two-fold purpose. Water flow through the filter and aeration both of which are essential to maintain a healthy environment which will stimulate fish growth. Another function of the filter is to circulate water, as most of us know warm water rises and cold water sinks. In a tank without circulation layers or strata of hot and cold water form which can create grave problems in fish health. As the fish swim from top to bottom they pass through these temperature levels and could become very sick because of the constant adjustments their bodies would be required to make. Essentially they are affected in the internal pressure of their swim bladders caused by expansion or contraction of the bladders as it warms and cools. Most filters are able to handle the circulation

(continued on page eleven)

CONTRIBUTE TO SUCCESS OF GUPPY ROUNDTABLE

Located the keys to mastering the complexities of guppy genetics, or food recipes guaranteed to raise LARGE guppies, or made an amazing discovery in guppy breeding techniques? Do not be shy about sharing the secrets of your success. Your articles are of paramount importance if we are to maintain the reputable quality of our newsletter. Incapacitated with a crippling case of writers block and cannot think of a story theme? Follow Stephen Kwartler's charming lead and write an article on how you started breeding fancy guppies, that is ONE story all breeders, whether advanced or novice, have rattling around in their repertoire of tricks. Guppy Roundtable is rapidly becoming the most effective forum for guppy breeders to meet colleagues and swap their best tips. Write an article for publication in Guppy Roundtable, the new official monthly publication of the International Fancy Guppy Association. The continued growth and success of your newsletter depends on it.

PLEASE FORWARD YOUR ARTICLES TO

Davidene Tait
Newsletter Editor/Publisher
Pan Pacific Guppy Association
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problem by lifting the cool water off the tank bottom and pushing it to the top, after a short period all the water is at the same temperature and circulation keeps it that way. Specific filters are designed for specific tank set-ups, and there is really no overall type filter which can be used for every purpose. All have certain advantages or disadvantages. Let us examine a few of the more popular types.

BOX FILTERS

A box filter sits on the floor of the tank usually with a central stem or chimney. The lid is punched or slotted to allow dirt and water to flow down through the filter medium. The cleaned water is pumped or lifted up through the chimney by the air bubbles.

This is perhaps the most popular filter, but it does have two disadvantages. First, the flow of clean water up the chimney creates turbulence above the lid where dirty water is collecting to enter, and often particles of refuse are swept away from the entrance area by the updraft of water, thus it takes longer before these bits and pieces of refuse are finally trapped. Second the filter leaves a dead area of water below the level of the lid where circulation is poor and where much filterable refuse is left to accumulate as an unsightly layer of muck on the tank floor. When this type of filter is utilized, frequent siphoning of the bottom muck must accompany changes of the filter's medium.

OUTSIDE FILTERS

These filters hang outside the tank, the pick-up siphon stem can be adjusted to just clear the tank bottom, thus they do a good job of sweeping the tank clean. Like a vacuum cleaner. Circulation is good, however the re-entry tube which brings water back into the tank is generally too close to the siphon tube and creates turbulence

in the pick-up area and is therefore slow in removing heavy particles attempting to enter the siphon tube and being washed aside by the turbulent down-flow of clean water. One distinct advantage of an outside filter is that it can be cleaned without reaching into the tank, and dripping water all over. This will probably impress long suffering wives who object to drips all over the living room carpets and floors.

FAST FLOW FILTERS

These are the modified outside filters which pump their water through a heavy gauge plastic tube which hangs behind the tank. The re-entry nozzle can be positioned well away from the exit siphon tube and thus the turbulence is moved to an area where it can do more good, the effect of the flow across the floor of the tank is to sweep debris towards the exit siphon (inlet) tube. The main disadvantage of this filter is that it cannot be easily installed in a multi-tank set up because of expense and because it eats up vast quantities of air, roughly three or four times the amount needed for a box filter. It is, however, extremely efficient and worth the extra investment, especially where a very large tank (twenty gallons or more) is to be efficiently filtered. Have discovered the flow of water can be greatly increased by lengthening both halves of the large flexible hose which pipes water from the filter back into the tank. An extra six and a half inches on both halves can give twenty-five to thirty-five percent increase flow in gallons per minute.

UNDER GRAVEL FILTERS

These filters are ideal for Show Tank set-ups where a visible filter would spoil the effect. Used under the tank gravel the water and debris are decomposed by bacterial action and urea and ammonia compounds are changed

to nitrogen compounds and become useful plant food. They require no filter medium other than gravel and providing the tank is not overfed will perform very efficiently. However I am not at all sure they are best for guppies since they cannot handle the heavy feeding required for fast growth. I ran into a lot of problems three years ago because the filters sucked the brine shrimp down into the gravel where it died and decomposed. Pretty soon I had a real ugly mess on my hands, and every fish had tail rot and split fins.

I do not blame this on the filters but on the tank set-up I was attempting to evolve: where clean water no left over food and ease of maintenance were of prime importance. For short term condition such as a week long Guppy Show I feel they are fine, but in the fish room where fish must live for months, would not advise them. Another disadvantage of course, is that because nothing is extracted from the water, there is a gradual build up of dissolved salts. A fish kept in a tank having an undergravel filter is transferred to fresh water the fish floats and we think it has dropped - definitely not so! The body fluids of the fish have absorbed the dissolved salts of its home tank which are denser than the new water, through the process of osmosis pressure the less dense water flows through the semipermeable membrane the epidermis or skin of the fish and the fish floats like a balloon. The same process can happen in reverse when a fish from fresher water is put in a tank of denser water with heavy dissolved salts concentration. The fish appears to shrink as body fluids are sucked away by osmosis pressure working backwards. Believe that if one changes water frequently these troubles can be avoided, however, many folks who use under gravel filters do not siphon often enough because their tank always appears so clean, clean yes, but what about dissolved salts concentration?

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I conducted a little survey of guppy hobbyists recently to find out what most use in the way of filters; the following is the result:

1. Box Filters are by far the most popular ninety percent.

2. Charcoal and glasswool are the most popular filter medium with approximately forty-five percent of those surveyed preferring gravel instead of charcoal.

3. Charcoal users were not at all sure that it was best but advised against frequent changes.

4. Filters should be cleaned and re-charged every seven to ten days, preferably once a week.

5. Frequent siphoning of tank water to accompany filter changes is considered essential.

A few more random thoughts on filters, first a clear plastic filter

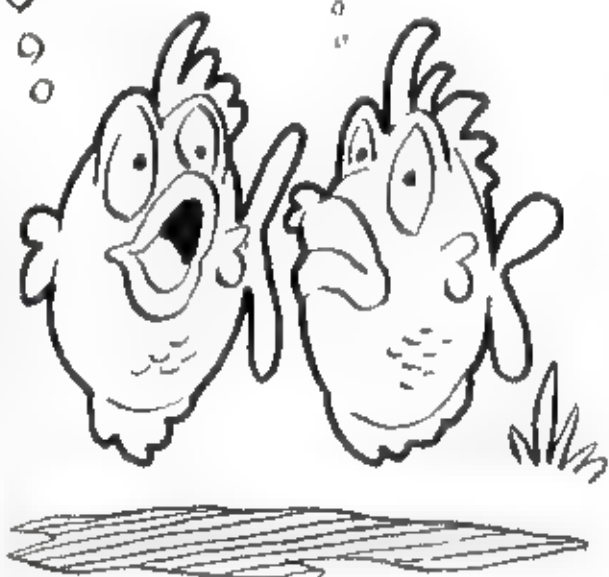
permits a view of the condition of the filter medium. If large chunks of food are sucked in, it is best to replace glasswool before the food decomposes inside the filter and fouls the tank. The flow of air through the filter should always be heavy enough to create good circulation. It is important that for this purpose the filter be sitting level on the tank floor and not lying on its side or tilted. When filters are re-charged all slime, algae and snail eggs should be scrubbed off them (they look better last longer and are not a source of disease if this little chore is attended to with care). It is also essential that the air pipe be swabbed clean with a pipe cleaner and the inside of the chimney with a brush made for the job. If one pays attention to small details his tank will show the benefit of his extra effort.

Clear, pure, sparkling water

is to a fine show guppy what fresh country air is to a human. It invigorates and stimulates robust health. If your fish fail to exhibit this kind of robust vigor look to your filter and ask yourself the question does it or doesn't it?

I have had numerous visits to the homes of would-be guppy breeders and in nine out of ten cases when I have examined their tank setups, find too little air and too small a filter usually all clogged up, which should have been changed weeks before. My prescription is always the same: get a bigger filter and buy a pump which will make it work properly. In carefully thinking the filter situation over here is what I personally would like to see: A box filter, easy to clean and maintain, of at least one pint capacity, with the ability to pick up dirt off the aquarium floor. With intake slots on the sides rather than the top and with enough built-in weight to anchor it down without gravel or charcoal. Perhaps some ardent hobbyist or enterprising manufacturer will accommodate us. I can guarantee a large demand for such a unit.

Regarding filter sizes, I use a half pint capacity box filter for a five gallon aquarium, a one pint capacity for a ten gallon aquarium and one and a half pint capacity for a fifteen gallon aquarium. I put enough air through each filter to churn the water's surface and replace the glass wool every ten days. Usually the old glass wool is dark brown with fish feces and shrimp egg shells. I do not change charcoal very often. I simply scald the old charcoal under the hot tap. I usually only replace charcoal if some disease is present in the aquarium, which is seldom. This plus constant siphoning of bottom mulm and occasional scrubbing down of glass algae and slime keeps my aquariums clean and presentable, and this is evidenced by the general health, vigor and brilliant color of the guppies as they slowly mature into show winners.



"Do not inhale. The filter needs changing."



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HALF-BLACK PASTEL TANK
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GUPPY CENTREFOLD

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FIRST PLACE
BREEDER MALE
JIM ALDERSON
PAN PACIFIC GUPPY ASSOCIATION SHOW
APRIL 24-25 1993



ALL I WANT FOR CHRISTMAS IS ELECTRICITY

By Meloney A. Hoyt
Kneap Aquarium Society

I have always dreamt of a white Christmas, and December 1990 was my first. Along with the beautiful blanket of white that covered our lovely landscape came a chilling reality that nearly broke my heart. You see when the snow fell the winds came, the temperatures plunged and our electricity failed. My family broke out the candles, huddled around the fireplace, and I went about unplugging my aquariums. This was eight o'clock Tuesday night. I was not too concerned about my fish because I was unaware just how cold it was going to get, and I assumed the power would be on by morning. It almost always is.

Upon awaking the next morning I realized we were still without power and the temperature outside was in single digits. This made our house extremely cold. The woodstove worked hard but was only able to keep one room above forty degrees Fahrenheit. Worst of all was the fact over one hundred thousand people in surrounding counties were without power and it was to be days before the electricity would come back on. When I checked my tanks I realized I had a problem on my hands. The temperature in my twenty large aquariums (fifteen and twenty gallon) had dropped twenty-five degrees Fahrenheit during the night. The temperature in my ten and five gallon aquariums had gotten even colder. I was amazed to see that my guppies were still alive despite the fact that they were in fifty degree water.

Resisting the urge to panic, I went about preparing the aquariums for the days to come.

First, I did not feed any of the fish. Reason being, in cold temperatures the "good" bacteria in your tank will become stressed and even die. Eliminating the food will reduce the amount of wastes in the tank by eliminating excess uneaten food and cutting down on the fish excrement. A few days without food will not harm healthy fish and this also gives your bacteria a better chance at survival.

Second, I did partial water changes, about ten percent of volume. I did use warm water, being careful not to raise the overall temperature by more than three or four degrees. The most important reason for the water change was to add more oxygen to the water. The tank had been completely still at night, therefore not absorbing as much oxygen as normal. Another good reason for a partial water change was to help eliminate some of the waste products already present in the aquarium. I should mention that when I did the water change I did not disturb the gravel, but I trickled the fresh water into the tank slowly, disturbing the surface as much as possible.

Third, I added a dose of stress coat and ammonia eliminator to

the tanks in hopes this would help the fish a little. Finally, I covered all the aquariums with heavy wool blankets. This was done to try and preserve a little warmth in the tanks and to make the fish think it was night time. Due to the cold the guppies were already stressed. By keeping the tank dark and quiet, I hoped to slow down their activities so they could reserve their energy. This also kept them from being frightened from movements outside the tank.

There was not much else I could do for my wet pets, but hope and wait.

By Thursday morning, still without power, my large aquariums were struggling at forty degrees. The smaller aquariums no longer registered any reading on the thermometers, which only displayed as low as forty degrees Fahrenheit. The house was very cold and in my "fish coma" you could see your breath. The water heater no longer held any warm water at all. Fortunately, our well is gravity fed so we did have water. I was able to heat a few gallons of water on top of the woodstove.

Unbelievably my fish were still alive. Once again I did ten percent water changes, added stress coat, then covered the tanks back up.

Thursday night I checked the

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"I do not care if your aquarium heater broke. You are not wrapping the tank with an electric blanket!"

aquariums once more by candle light. The guppies were all quiet but hanging in there. We had been without power for forty-eight hours by then. Friday morning was horrible! Upon checking the aquariums I realized that forty degrees was just too cold for my fish.

Unbelievably, however, many were still alive! Unhappy but alive. After a hysterical phone call to a friend, I immediately did what I could for those that were still alive. At this point I was unsure if my efforts would work or if it was all in vain in either case it was better than watching all the fish die and doing nothing. The hardest part was removing all the dead guppies. This was very important as decaying bodies can do great damage to the water quality and there is also a risk of spreading disease. I once again did water changes, covered the tanks back up, and prayed the power would come back on soon.

Along with my guppy tanks, I also have three betta bowls and one bowl of killee fish. Until Friday morning they looked fine. However that horrible morning I found them all laying on the gravel. I assumed they too had perished from the cold. After caring for the aquariums was going to deal with the bowls. When I lifted the first betta he twitched, and I jumped! Dare I hope? So

took four one-quart jars and filled them with warm water about eighty-five degrees Fahrenheit. What did I have to lose? I also added stress coat and a few grains of aquarium salt. I then added the bettas and the killees. Within the hour all the bettas were happily swimming around in their jars admiring the view of the woodstove. I decided to move them closer to the only source of heat in the house.

Unfortunately only one female of the three killees survived. However they left me approximately fifty eggs, and upon writing this article I have so far two baby killees. Not all of the fry are living post-hatching. I do not know if this is due to the extreme cold or my lack of experience with fish eggs, as I have only spawned livebearers thus far. However, still have forty eggs that are close to hatching, two healthy babies, and lots of hope.

At six o'clock Friday evening the power miraculously returned, definitely lifting everyone's spirits. The first thing I did was plug in all the heaters and air bars. I also uncovered the tanks, but left the lights off as my fish had been without light for seventy hours and I did not want to shock them any more than necessary. Then I removed the power filters, dumped the old water, changed the moss

and carbon, filled them with clean water, and got them running again. I decided not to do another water change and allowed the heaters to gradually bring up the water temperatures. Finally, added one half dose of methylene blue to each tank in hopes of preventing an outbreak of ich. The following morning I began feeding the fish again, in small amounts. I took them a while to regain their appetites. I found the temperatures were almost up to normal and had not lost any more fish.

Most of the survivors began acting normal as soon as the temperatures were back up in the 70's. Only a few showed signs of stress over the next few days. I did wait one week before cleaning the aquariums because I felt my fish had been through enough stress. Also wanted the remaining "good" bacteria to have a chance to recuperate.

Despite my efforts, I lost almost half of my beloved wet pets, and for them I grieve. However, I was able to save many, and for them I am grateful. I know I am not alone in my grief over lost fish. To those who lost part or all of your fish, I express my sincere sympathy. I can only hope that you never experience a situation so extreme again. However, if one does arise, hope that sharing this experience will help in at least saving some of your tropical treasures.

strips for your tanks and the ballast needs replacement, I have found that the four foot by two foot long bulb shop light often found in Fedco, K-Mart, Wal-Mart Stores or a discount lumber company for ten dollars or less works just as well and will save you a couple dollars as well.

If you want to make your flake foods freeze dried blood worms or freeze dried tubifex worms go further. Try carefully running them through your blender. You can reduce them to such a fine powder that new fry will have no problem with the food.

This egg crate foam can also be used in box filters and outside power filters.

If you need to replace your aquarium gravel and are using the smaller size aquarium gravel, you can save yourself nearly half the cost of a fifty pound bag of aquarium gravel by buying a pound bag of granite grit from Aquway.

If you are using fluorescent light

GUPPY GAMBITS

By Arthur Parker
New England Fancy Guppy Association

Do you use sponge filters in your guppy breeding tanks? When you feel that you should replace them, you might want to think about purchasing some egg crate foam packing material. Cut it to the same size as the filter you want to replace. Because of the shape of the material, you will have a bit more filtering area than you would if you used a piece of flat foam.

SINGING THE BLUES

By Ann Rodriguez, Ph.D.
Biologist, Ventura College
Pan Pacific Guppy Association

As most hobbyists know, the guppy is viviparous, literally meaning livebearing. Fertilization is internal; sperm which do not immediately fertilize eggs can be stored in the walls of the oviduct to fertilize successive broods. Eggs are fertilized before being released from the ovary and after fertilization, embryos are enveloped by a layer of maternal tissue called a follicle. This follicle and the yolk sac of the fry serve to nourish the developing embryo. Gestation for developing fry is about thirty days.

When I started breeding guppies a few years ago, I picked a few colors that were especially appealing to me, one being the Half-Black Blue Delta. There have been some nice specimens in this line and I have endeavored in my breeding program to produce a good size with a light blue delta tail. Now that I am in the third generation, I am experiencing what rumors have said about this line, namely the problem of infertility. Continuing my breeding program is frustrating since often the large beautiful fish are infertile. Here are some of my thoughts as I strive to understand and cope with this problem.

My Half-Black Blue females exhibit differences in the way the fry are born. Some females have the typical pattern of getting large and dropping all their young and then waiting to have the next brood about thirty days later. Recently, however, I have noticed a different pattern occurring in which a few fry seem to be born every week or so. In these cases, the female never gets very large and of course, it is difficult to tell when she is going to drop her three-to-ten babies.

Many of my Half-Black females are

voracious eaters of the fry. Young will be consumed by the female having the fry or by tag along females that wait eagerly by the female giving birth. I know babies have been born when my pregnant female is slimmer and the other fish are examining every "hook and cranny" of the tank. Apparently this type of cycle that I am seeing is not uncommon in guppies.

Scientifically this phenomenon is called superfecundation. The result is a kind of assembly line production of fry. The female may have unfertilized eggs developing at the same time as embryos in various stages of maturation, from just fertilized to ready to be dropped. This cycle may be easier on the female and may result in larger fry born which would have a better chance of survival. Since fry are born at different times, in the wild this would help ensure survival of fry since some would be born under better environmental conditions. But what may be advantageous in a natural setting is not so for a hobbyist who is trying to figure out when the young are going to be born.

But enough about my Half-Black Blue females, because I think my main problem of infertility lies with the males. Half-Black Blue females placed with males from different color strains become pregnant, fill up with fry and seem to exhibit the ordinary thirty day cycle.

Often my "best" Half-Black Blue males are lazy in courting females. Even some young males appear indifferent to females and lack the "dance and chase" courting characteristics that other strains possess. Presumably in natural environments, males which actively pursue females would mate often and pass on this behavioral trait.

In my effort to produce a beautiful fish, I have selected my breeder males on the basis of size, color and other traits, but have never considered vigorous courtship behavior as an important trait. In the absence of choosing males with these behavioral traits, I may have literally "sown the seeds" of infertility in addition to males that do not have courtship displays. They may lack adequate testosterone to produce viable sperm. Other physiological and anatomical problems may also be linked with hormone deficiencies.

This article is not intended to answer definitively the causes of infertility, hope however it will stimulate other hobbyists to write about the subject and hopefully we can get some answers to this perplexing problem that plagues many of us.



IDEAL WATER FOR BREEDING GUPPIES

By Harry Nelson

When writing an article on water it seems only normal to give a complete chemical breakdown and explain what it does for the average hobbyist. The average person, however, seems mainly interested in whether or not the guppies stay alive. There are times when it may be very beneficial for him to know his own water's hardness and pH. It especially helps when water conditions are quite different from his own. Newborn fry can usually be started in water drawn from any tap but it is often hard to keep the old stock alive long enough to get the young started if the hardness and pH range a way out of proportion to yours.

Most of your trouble will probably show up in the first few days. The greatest mistake we probably make is in rushing to feed them. They should be left in the tank at least forty-eight hours so they can adjust their bodies to the new chemistry of just the water without having to adjust to a new food as well.

Have you ever wondered why people use such different foods in different parts of the country? It is because of water conditions. Certain foods work well for people in New York, yet if we used it in Chicago we would get very different results. It is wise to belong to a club where you have close communication, since each locale seems to get satisfactory results from the same ingredients. With personal communication with other members you can quickly find out which foods are best in the area in which you live. If you use food from another area it is possible to cause a disease on your fish. If most of the hobbyists in your area keep water standing for a couple of days with a filter

running, it is probably advisable for you to do the same. After you are organized experiment by using fresh water out of the tap. It may prove successful and save you work. Some clinics have poor filtration set ups and use large amounts of chlorine and alum to purify the water. This process takes suspended particles out of the water thus making it necessary to stand or filter for several days.

It does not usually pay to try to adjust your pH and DH. I have spent hundreds of dollars on a demineralizer to soften water and adjust pH and DH for Discus fish. After several years of studying I found I would do just as well using plain tap water as I did taking what was supposed to be the "ideal" waters they were caught in. I found out that by using soft water to keep the Discus in good health I had to use a very high percentage of vegetable matter in their food and the higher degree of hardness I had to go almost one hundred percent meat food. At times to be the case with guppies, the harder the water is the more you are required to change it. Hard water is a perfect set up for higher bacteria count. The more bacteria you have the greater the pollution.

If you have to use water from a well you may run into a different set of circumstances. Almost all well water is extremely hard. There are also times you may have to do as the fellow with soft water does. Chemicals you use for reading even your best electrical testers can be somewhat misleading. They check all mineral contents yet may have very little effect on your fish. If you had a small magnesium content in your well or just a trace of copper you could get a very high reading. This would have almost no effect on fish or even raise the bacteria count. Another warning I might give you is in changing water. I can change one hundred percent on my fish

and add fresh tap water without any effect on the fish. This I do weekly. However, if fish are kept for an infinite period of say three months and I tried to change one hundred percent of their water it would be a great disaster. They must be acclimated gradually. Guppies seem to acclimate to one who is handling them very rapidly. This is the reason one person in your group may do well with a strain of guppies while another may run into trouble. The opposite may also be true when you are having trouble and they are successful.

I do not care to add any type of mineral blocks or anything else except salt. The strange thing about adding salt is that I have to add different amounts for different colored fish. This holds true regardless of whose strain it is. For red fish use three tablespoons of salt per ten gallons of water. Green, blues and variegated require only two tablespoons per ten gallons and albinos need only one tablespoon per ten gallons. If add any salt at all to blacks it will only cause a cancer to occur. This dosage seems to keep them all healthy and tails with a minimum of splits.

In conclusion I wish to say it is my belief that water is one of the most important objects in raising good fish. It is not nearly so important whether water is hard, soft, alkaline or acid, as it is to keep it as clean as possible. You should adjust yourselves to the discipline of how you can best care for your wards with what you have. You will note that one man does not dominate the show field of guppies as was true some years back. The person working the hardest is the one who is winning at the shows and these winners are no longer from any one given area of the guppy world.

Do you believe all show winning guppies could possibly come from the same type water? I sincerely doubt it.

FOOD FOR GUPPIES

By Dick Elasmann
Guppy Associates of Greater Cleveland
Downloaded From ComNet-Serve

When looking for the various types of food that are best for young guppies think you should first try to determine what their needs are. I am not or do not claim to be an expert on guppy foods. All I look for is what I think is best for them. When looking for or analyzing a food, the first thing I check is how high the protein content of the food is. I find that the higher the protein content of the food the better the guppies seem to grow. If you look for a high protein and a low carbohydrate level this will help to discourage body bloat which I believe is responsible for fatty degeneration of the internal glands.

Bloat is usually seen in a guppy that has an abnormally large chest expansion. It actually seems that the chest of the guppy is about to burst. If you can learn to spot this early enough you can put the guppy or guppies so affected or what I call a starvation or reduced diet. This means possibly not feeding anything for one or two days and raising the temperature. By raising the temperature you will speed up their metabolism and with the increased vigor due to the high temperature they will be able to use up some of this stored up fat. By reducing the stored up fat they will become more active and slim down like a normal guppy. I seem to have gotten away from foods, but wanted to let all the people that might have body bloat in their guppies know what I do to help combat this condition.

Getting back to foods, think A HIGH PROTEIN FOOD with a variety of contents is best. Use a commercially packed food with a high protein content once a day. After about one hour I try to follow this up with live, newly hatched

brine shrimp. In this way, the advantages of the live food are also helpful to the dry food. I use three types of dried food. One type in the morning followed by live shrimp in one hour. A second type in the afternoon followed in one half by live baby shrimp and a third type for smaller fish of about two to four months of age. The third type of food consists of one-half Tropic Chow pellets and one-half finely sifted from the first two dry foods that use for my older guppies. I find that when you buy dry foods, medium is too large and fine is too small. So I sift medium type food through a nylon fish net. In this way I get two sizes of fish food from the medium consistency one of which is just right for older guppies and the other is just right for younger fish.

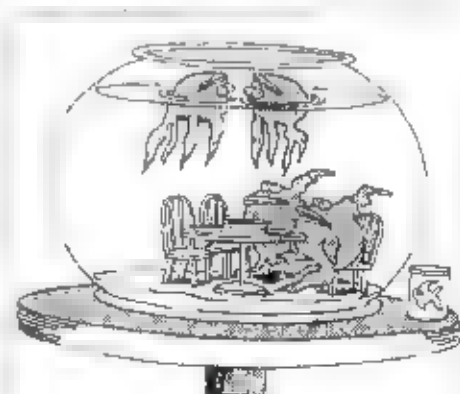
I do not feed new born baby guppies anything but live baby brine shrimp for two months, day and night. After two months of age they get graduated to this fine sifted type dry food and baby shrimp.

For the evening meal, try to give them some type of food that will last them all night. This is usually frozen adult brine shrimp, live daphnia or mosquito larvae. Be careful not to put too many in your tanks at one time because if your guppies do not eat them all they will hatch into mosquitoes and your wife will get upset. I have also used tubifex worms, which are an excellent food. But be sure to keep them under running cold water for approximately one week. In this time they will have excreted all their products, which are

loaded with bacteria. Also pick out all dead worms as soon as they are noticed, because they will spoil the whole batch, and never feed spoiled worms to your guppies.

I also make my own cooked food, which I rotate with the dry two or three times a week. In making this food start with one pound of a special food that mix myself which has nothing but one part shrimp meat, one part liver meat, one part beef meat, one part fish meal and one part crab meal. To this I add six whole eggs and enough water to make a thick paste. This I drop slowly into boiling water. After five minutes boiling, take this mixture and let it settle. Then pour off the water which is good for rearing daphnia and I have a food that looks a little like cooked oatmeal. This is put into baby food jars and kept in the refrigerator until used. Sometimes when mixing this food add a few drops of vitamins or B-12 powder for growth. I have also varied his formula to include rabbit pellets which are high in vegetable matter and roughage. This cooked type food seems to be enjoyed by my guppies as a change in their diet and is good for winter feeding when live foods are not too available.

I hope this article has given you some new ideas on foods for guppies.



Well the Parkers are dead. You had to encourage them. A lake fish's diet, you?

SOME OF THIS, SOME OF THAT

By: Paul Gorski, Judging Board Chairman
Stan Shubel, Past Judging Board Chairman
International Fancy Guppy Association

Question: Can you give the readers of Guppy Roundtable a brief overview of how and why the International Fancy Guppy Association was started? I understand you were instrumental in the organizations formation.

- John Salerno

STAN SHUBEL: Initially the International Fancy Guppy Association was formed by individuals primarily from the Midwest which quickly spread throughout the United States and Canada. The main purposes were to promote the fancy guppy and provide uniform judging standards as well as train judges in applying them. It also was to provide information on raising and showing guppies.

As to being instrumental to its foundation, I guess I did my fair share, but it all came about through the efforts of a number of hard working people.

Question: Do you have any guppy paste food recipes you use, or that you would recommend for use to a novice guppy breeder?

- John Calderia

PAUL GORSKI: I do not use any paste food but I have tried it in the past. Tank pollution resulted when I tried liver paste. I do feed a blended mixture of beef heart, flake food and vitamins that seems to work well. Sometimes I also add shrimp (ocean - what we eat) to the beef heart food. With any of these mixes, feed sparingly.

Question: Can I, or should I, breed from the same fish I will be showing, or is the normal practice amongst the country's top guppy breeders to breed

show fish and breeder fish? What are the pros and cons?

- Victor Mazzella

STAN SHUBEL: I very seldom take my best breeding fish to a show even though they may be of better quality than the ones I show. It is not worth the risk in getting them over stressed or possibly picking up a disease. At the same time, I have had Best of Show winners that did not meet my breeding requirements and so were not used for breeding purposes.

Question: I am confused. I have heard through the proverbial grapevine that a Half-Black female will be disqualified by the judges on the judging bench if the black portion of her body is not discernible. However, I have noticed that the fish referred to as Half-Black Blue's do not have half-black bodies but rather half-blue bodies (the area that should be black is blue) and these fish are not disqualified. Why the double standard?

- Lee Flanders

PAUL GORSKI: Lee, we do not maintain a double standard, but you have a direct "hit" on a problem that does exist on the show bench. Half-Black females often do not have a totally half-black body but will fade out to a half-smoke. It is a judges call as to whether she displays a half-black body or not. You will find that often these females are disqualified and this action has caused tremendous controversy. The Half-Black Blue class is a point of emphasis in the judging seminars. You are correct, the fish should be half-black not half-blue and those that do not meet the standard should be disqualified. You will get some bleeding of caudal color into the peduncle area as you often see in Half-Black reds but the blue when it predominates should lead to disqualification. Attend a judging

seminar sometime, we beat things like this about for hours.

Question: If I am religiously performing twice weekly water changes, do I need scavengers in my guppy tanks? If so, which ones?

- Kevin Muir

STAN SHUBEL: Not necessarily. small catfish do stir up the bottom of the tank to help the filter pick up debris but they will eat baby fish. Also, their habit of splashing water can spread disease from tank to tank.

Question: I am very limited on tank space. I keep fry in floating nets with the parents and use a small fry trap when the "hit" female is ready to drop her fry. I have never had more than ten surviving fry. Could my setup be the reason?

- Kenneth Hirschorn

PAUL GORSKI: I know of only one breeder that successfully uses traps in breeding/raising tanks to hold bred females. I think you have answered your own question. If ten fry is all you can save then your method needs to be changed. Try unwinding a "chore-girl" scrubber and use this to protect the fry.

Question: In your opinion are there particular strains of fancy guppies that may be easier for a novice guppy breeder with a limited number of tanks (ten) to raise? What are several of the more difficult lines of fancy guppies to breed?

- Nick Vissar

STAN SHUBEL: I would have to say almost any of the half-black varieties, Half-Black AOC, Half-Black Red, etc. with the solid colors and snakeskins next and the albinos probably being the hardest to raise.

Question: Is there a simple, easy manner in which a breeder can

(continued on page 21/22)

determine if the females are infertile or the males are sterile in a particular line of guppies? Is there anything a breeder can do to increase the chances of a female dropping fry from a line of guppies known to have fertility problems?

- John Clay

PAUL GORSKI: Outcross to fertile lines may be the answer. As to the infertile/sterile strain of guppies, give them the best diet possible with plenty of live food.

Question: When you are judging a particular class of guppies, what trait or traits immediately catch your eye? Is it the perfectly colored guppy, the perfectly ported guppy, or the large bodied guppy?

- John Salazar

STAN SHUBEL: I must admit I am partial to the perfectly ported (or as close as you can get) good colored guppy.

Question: I am a burgeoning novice guppy breeder. It is somewhat frustrating to spend

many months raising fish to what I perceive as show quality and enter them in a show only to have the fish returned with no comment as to why they did not place. Would it be possible to include a small notation on the bags of fish that did not place indicating what area of the fish needs to be improved (i.e. fish too small, color not good, dorsal too short, etc.). I realize club members are tearing down the show room the last day of the event, but I am sure I am not the only breeder who is frustrated by receiving a fish from a show with no idea why it did not place.

- Victor Mazzella

PAUL GORSKI: It is not practical to do this because you may not want the fish packers opinion. You should compare your fish at the show (attend if possible) or at your club meeting. Time just does not permit written comments during the judging. Perhaps a number of the host clubs may do this for you if you personally contact them.

Question: Do you think there are any benefits to keeping your

guppy fry in "green water" tanks?

- John Salazar

STAN SHUBEL: Not really. I have achieved comparable results with clear or green water providing adequate supplies of fresh baby brine shrimp are available.

Question: I know this question is not directed towards fancy guppies, but rather their plain, wild brethren. Can you tell me what their environment is like? How much turbulence is in their water? What do they eat?

- John Calderia

PAUL GORSKI: I have had the pleasure of seeing wild guppies when I went through a survival school in Panama. I found them in brackish, still water filtering about near the surface. As to what their diet consisted of - anything they could get. There were plenty of mosquitos and lots of algae present. I wish I had the presence of mind to bring some back with me, just for having some wild stock. They were like the feeder guppies you find in pet stores now.

Question: Recently I have heard many horror stories of the dreaded "clamping disease" and "wasting disease" currently running rampant through many of the country's top guppy breeders fishrooms. Has anyone been successful in isolating the disease pathogen of either diseases? Are there any medications effective in eradicating these diseases?

- Nick Vissar

STAN SHUBEL: These two diseases are probably the worst I have run into since I have been keeping fish. The "wasting disease" is usually caused by infestations of nematodes or parasitic worms. There are a number of medications available, but the most effective is Discomed. Use as directed and

retreat if necessary. I say this because I have found that the disease may reappear three or six months after treatment. Nematodes are present in much of our fresh water but are usually not much of a problem under normal conditions. As with many diseases some strains of fish may be affected more than others even in the same tank.

Unfortunately, the "clamping disease" has not really been identified, secondary infections are usually of a gram negative bacteria. As best as I can tell the disease arrived from the far east. From my observations I would tend to say it is bacterial in nature, but in a way it acts like a virus, which is bad news if true. I tried literally dozens of different medications and so far, at least

in my water, the combination of Bionox, Formaldehyde and Valvet Plus has been the most effective. But even with this powerful mix, my rate of successes have been limited. I am still working on it and if I come to any definite conclusions I will send in an article.

In the past, it was my normal practice to use water from another active tank, or a used filter when setting up a new tank. With the advent of newer diseases I have been forced to change my procedure. Now I use all fresh water and a clean box filter with marbles and floss. I add a small amount of salt (usually one tablespoon per five gallons) along with A.B.A. which builds up an excellent bacteria bed. I let the filter run for twenty-four hours before adding fish.

MESSAGE FROM THE PRESIDENT

By Jim Alderson, D.V.M., President
International Fancy Guppy Association
Pan Pacific Guppy Association

Many thanks to the Chicago Club for hosting a fine Annual Show. The accommodations were great and the show ran very smoothly. We all know how much work and participation is required to host an Annual Show. My only regret is that the schedule is so full very little time is left to talk about the guppies, particularly with some of the newer members. Non-meeting shows are somewhat less hectic and hopefully more discussion of breeding and raising techniques are conducted.

There are four shows remaining in the 1993-1994 show season. This schedule will afford some exhibitors who are behind in their classes to turn up the heat and compete in the spring. Babies born in the last three months will be mature for showing in the second half of the current show season.

I have instituted some procedures

which have really helped in the fishroom. I sterilize all tanks using chlorox in between batches of fish. Large tanks I leave in place and fill them to the brim with one cup of bleach per twenty gallons. Overnight all the protein and organic matter will be oxidized and turn white. I then siphon all the water out and wipe down the sides with a paper towel. The tank is refilled, Novaqua and salt are added and allowed to age for twelve to twenty-four hours. A few insignificant fish are added to make sure all the chlorox has been neutralized, and a few hours later new fish are put in the tank. Make sure you sterilize the airline and filters as well.

If you are fastidious in the tank maintenance throughout the winter and spring, your fish will respond by developing to their maximum potential. Great show fish are bred and raised over the winter not during the show season.

I hope everyone will raise a lot of fish this winter to maximize their participation in the show season next year!

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Stephen Kwartler, Clearing House/Shop Chairman

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Please forward questions for personal reply in care of:
Davidene Tail

Pan Pacific Guppy Association
3619 Menlo Avenue, Unit 8
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PAN PACIFIC GUPPY ASSOCIATION MEETING SCHEDULE

DECEMBER 12, 1993 - 5:00PM
ANNUAL POTLUCK DINNER
David Wexler's Residence
11487 Biona Drive
Los Angeles, California 90066
310 390-4718

DIRECTIONS: Santa Monica Freeway East (10) to Overland Avenue exit. Turn left off freeway off ramp onto Overland Avenue. Overland Avenue to Venice Boulevard and turn right. Venice Boulevard to Sawtelle Boulevard and turn right. Sawtelle Boulevard to Biona Drive and turn left. Proceed on Biona Drive to end of cul-de-sac. Or, Santa Monica Freeway West (10) National Boulevard/Overland Avenue exit. Turn right off freeway off ramp onto National Boulevard. National Boulevard to Overland Avenue and turn left. Overland Avenue to Venice Boulevard and turn right. Venice Boulevard to Sawtelle Boulevard and turn right. Sawtelle Boulevard to Biona Drive and turn left. Proceed on Biona Drive to end of cul-de-sac.

JANUARY 9, 1994 - 2:00pm
West Covina Lanes Banquet Rooms
575 South Glendora Avenue
West Covina, California 91798
818 960-3835

DIRECTIONS: Santa Monica Freeway East (10) to San Bernardino Freeway (10) to Vincent Avenue exit. Turn right off freeway off ramp onto Vincent Avenue. Vincent Avenue to Glendora Avenue and turn right into parking lot at West Covina Lanes.

POTLUCK DINNER MEETING

ANNUAL POTLUCK DINNER AND MEETING

OF

PAN PACIFIC GUPPY ASSOCIATION

Hosted By
DAVID WEXLER
11487 Biona Drive
Los Angeles, California 90066
310 390-4718

ON
DECEMBER 10, 1993
FIVE O'CLOCK IN THE EVENING

Club members planning on attending this gastronomic event are requested to contribute their culinary specialty whether appetizers, casseroles, desserts, entrees, hors d'oeuvres, salads, soups or whatever (I shutter to think what a "whatever" may consist of). The annual potluck dinner is an excellent opportunity to dazzle your fellow club members with your culinary skills by enchanting us with your "delectable delights".

Make plans to join us for this festive event and share our bountiful repast.

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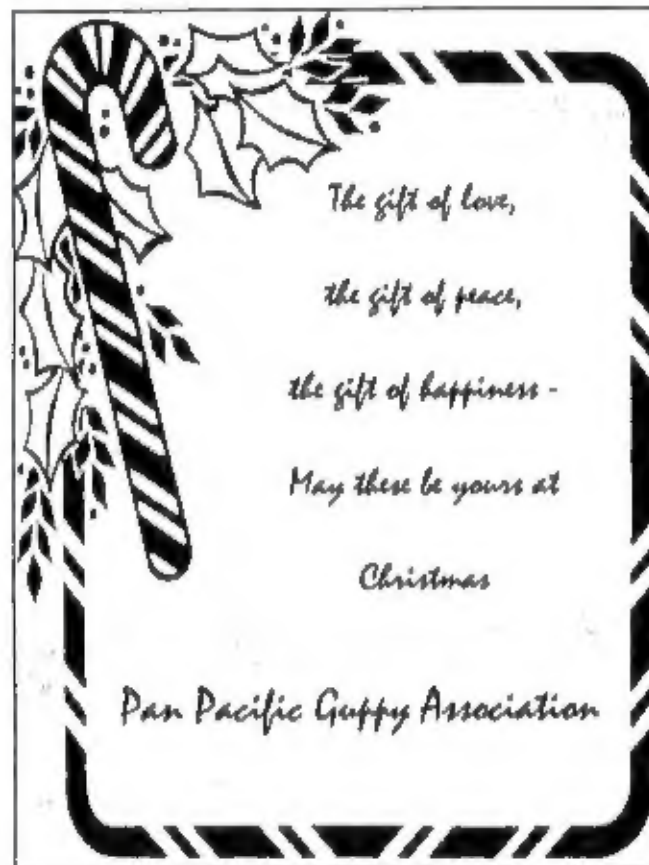
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Artistic? Experienced a funny "fishy"?? Sense of humor??? Dying to share your creative cartoons, doodles, drawings, illustrations and sketches with guppy enthusiasts around the world??? Send in your humorous "fishy cartoons" for publication in Guppy Roundtable.

The Newsletter Editor/Publisher reserves the right to refuse to publish inappropriate illustrations. Submission of cartoons, doodles, drawings, illustrations or sketches to the Newsletter Editor/Publisher does not constitute a commitment by the Pan Pacific Guppy Association to publish the creative submission.

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